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ABSTRACT

This pamphlet describes ways for children and caregivers to plan, cook, and eat together, blending practical health suggestions with sound educational philosophy. The ideas and concepts children can learn from cooking are outlined (e.g. motor skills, language, mathematics, executive abilities, etc.), and the importance of eating with children, from snacktime to a family-style school lunch, is discussed. Child-tested recipes in a 16-page section range from making simple non-cook applesauces with 3-year-olds, to ethnic recipes such as Indian fry bread and Hawaiian pudding for older children to try. (CS)

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ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL

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Cooking and Eating with Children

A WAY TO LEARN

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ASSOCIATION
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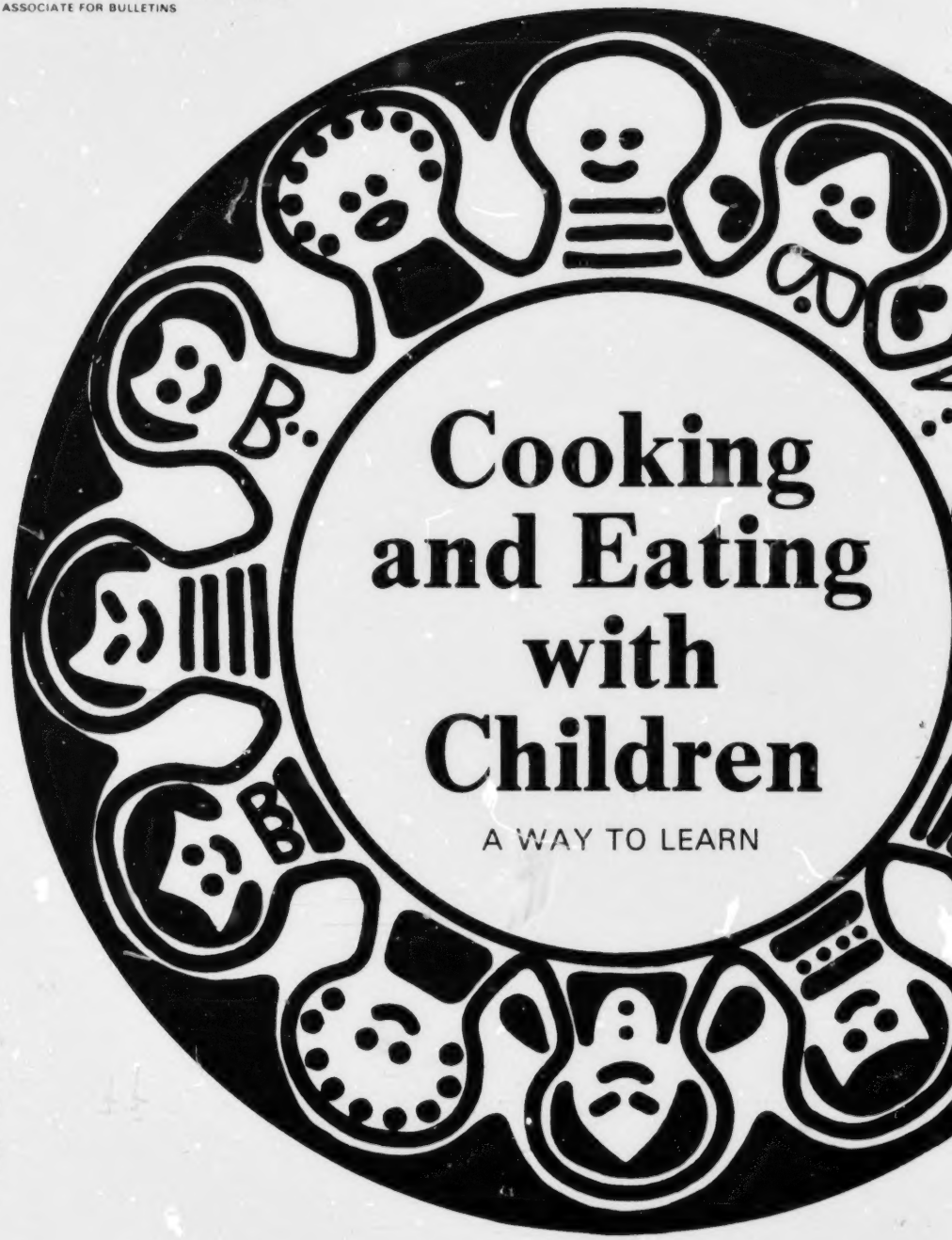

Cooking and Eating with Children

A WAY TO LEARN

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Contents

1 Why Cook and Eat Together?
3 When To Cook With Children
5 How to Organize and Proceed
  At School: Do Ahead of Time
  Cooking Experiences in the Home
10 Preparation and Cooking
13 What To Cook?
  Fruits
  Vegetables
  Meat and Egg Dishes
  Milk Products
  Breads and Cereals
  Jellies, Relishes, and Peanut Butter
  Desserts
  Snacks
  Juice Creations
31 Serving Snacks
33 School Lunches and Breakfasts
35 Learnings from Cooking and Eating
  Nutrition
  Motor and Perceptual Skills
  Developing Language
  Reading and Writing
  Mathematics
  Science
  Social Studies
  Executive Abilities
  Social and Emotional Development
46 Bibliography

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00005

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Why Cook and Eat Together?

What a wealth of experience children can get from cooking and eating together! Planning, talking, sharing, acting, doing, and evaluating mix and blend into rewarding learning. Cooking and eating are learning by doing in an exciting and satisfying way.

"We are what we eat," the saying goes. Scientific research is verifying that statement relating to all bodily functions, including intellectual development and learning. Yet many children in the United States and Canada today don't eat the right foods. Some are malnourished because of poverty, some because of their parents' lack of knowledge and indifference, still others because of habits and fads and the power of advertising on TV and other mass media. Whatever the reason, adults who work with young children can promote good nutrition in a variety of ways, and at the same time promote the health of the next generation of children.

Changing life styles, family patterns, and family roles have completely revolutioned food purchasing and preparation procedures in many homes. Knowing how to select, purchase, prepare, cook, and serve food is no longer the province of mothers only. Fathers, mothers, and children of both sexes often assume this responsibility, sometimes to share family duties, often because each family member comes and goes at different times and must therefore obtain his/her own food. Prepackaged, highly processed convenience foods tend to go into the grocery cart instead of do-it-yourself separate foods in a natural state. Many children are growing up without ever seeing time and heat transform leftover vegetables and a soup bone into a delicious Saturday lunch, without ever using a double boiler or

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even without smelling freshly baked homemade bread. More people are eating out more often rather than preparing meals at home, including more children in early childhood centers and schools.

Served a variety of healthful foods, most active, healthy children will eat what they need. This fact places much responsibility on the adults who schedule the foods children will learn to cook and on the adults who select and prepare the food served at snacktime and mealtime. Eating habits are strong; once formed, they are difficult to change.

Cook with children and serve to them only nutritious foods, such as fruits and vegetables and whole grains. Avoid sugar-laden cereals and heavily sweetened canned fruits, imitation, high sugar content foods and mixes, artificial cheese spreads, artificial food colorings and imitation flavors. All this will give children a powerful model to follow.

We have attempted to make the recipes and suggestions in this book as healthful as possible, using simple, natural ingredients that are also readily available. In collecting these recipes and suggestions, we were both surprised and somewhat appalled at the number of sweets and carbohydrates in almost every recipe book or collection for use with children. We have attempted to get a better balance of nutritional elements represented. When most cooking experiences involve sweets, children are bound to learn that sweets are valued and preferred. Most young children prefer simply prepared foods, nutritious foods. You may have seen the number of half-eaten cupcakes left by kindergarten or nursery children at a birthday party. No one would deny children ice cream cones, birthday cakes, or Christmas cookies, but everyone would be better off if sweets — including sweet beverages — were used less often.

If an adult expects a child to develop good eating habits, he/she must eat with the children — when they prepare food and at snacktime and mealtime. "Cap'n Catastrophe" and "Sheriff Salty" have pushed their sugar-loaded, expensive treats and empty calorie snack foods on television by eating them and saying how good they taste. Can we do less with nutritious food that children *should* be learning to eat? Other eating habits related to good nutrition are learned when adults eat with children — such as cleanliness and behavior promoting a warm, relaxed, unhurried atmosphere at meals.

Some of the things children of preschool and primary age can be expected to learn from food experiences are discussed in this book. Nutrition education, motor skills, and social learnings are always involved, whether emphasized or not. For a very young child, even dividing an orange and sharing it with a friend involve mathematics, manual dexterity, social growth, and emotional satisfaction. With older children, planning and organization — integral parts of any cooking project — may be far more important than any specific objective. The child learns as a whole, even though we may discuss those learnings in part.

When and how to involve children in cooking are discussed in separate sections. What to cook is found in the recipe section.

Who should do it? You and the children, whether "you" means *you* as a parent, teacher, day care worker, high school parenting student, or interested adult who enjoys the fun of cooking and eating with children.

00007

When To Cook With Children

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Almost any time is a good time to cook with children — provided it is unhurried. Children can learn to cook breakfast, lunch, and dinner. Preparing snacks is a good beginning at the youngest level. Holidays are timely occasions to bring out the hot plate in your classroom and explore a new taste experience to celebrate Halloween, Christmas, Martin Luther King's birthday, Passover, or the fourth anniversary of your day care center.

Gifts and "thank you's" are especially effective when they are food made with care and love. One first grade class had enjoyed many cooking experiences throughout the year, and decided to make peanut butter for Mother's Day presents. Their teacher writes:

"Taking the skins off the peanuts was quite a mess but loads of fun. I had set up two blenders that parents had volunteered for the day, and each child had a turn to add peanuts. The peanut butter smelled so delicious that the class and I had to stop to have a sample — on apple slices. The combination of flavors made a tasty snack. Then we spooned the peanut butter into small baby food jars which had been well scrubbed, and screwed on the tops. The children were all very proud of the gift itself and pleased with the taste of their efforts. They left happily for home,

00008

a recipe for homemade peanut butter accompanying each gift."

Children can cook to make meanings clear and understanding complete. What better way to help children understand the popular folk tale "The Gingerbread Man" than by letting them bake their own gingerbread men? (Page 29). Little Miss Muffet sitting eating on her tuffet will be more real once the children have made their own "curds and whey." (Page 27). The simple miracle of golden butter suddenly appearing in a jar of cream everyone in the class has taken turns shaking prepares a child as telling never could for references to churns and churning and buttermilk he/she will meet in songs and folk and fairy tales for years to come. (Page 27).

Cooking can be an enrichment or culminating activity for a unit of study, such as making cranberry relish (Page 28) or pumpkin pudding (Page 31) at Thanksgiving as part of learning about farms, food, and harvest or cooking something as simple as cream of wheat, oatmeals or grits when learning about pioneer times. Food experiences easily become integrated into the total program when interest is on family and home, the five senses, dental health, career education, occupations of men and women, the community, transportation, friends far and near, plants, animals, and many familiar subjects. Let the activity flow from what is going on in the total program or from a need in the classroom.

In the home, a rainy day or a "nothing to do" morning, having a child or two who could benefit from responsibility and accomplishment, or the feeling of "let's do something together" can indicate that now is the time for a cooking experience. Avoid putting children off until they are older and neater and better coordinated. Their interest and enthusiasm will fade away unless it is encouraged. When? The time is *now*.

The creative adult can open a new world of fascinating simple food experiences that might be missed by children whose food comes processed, packaged, and precooked. Rolling a bit of biscuit or pizza dough, "masa," or pie crust to cook along with the grown-ups, squeezing orange juice by hand, shelling peanuts or peas, making egg salad to spread on bread are some of these. Adult ingenuity and imagination can provide more — and the joy and learning that goes with them.

Fresh fruits and vegetables cut and served in a variety of ways keep interest high and open up many learning opportunities. Here are a few suggestions to get your thinking started:

Cut oranges into wedges, halves, circles, and semicircles. Cut apples crossways to show the star. Cut into circles, wedges, halves, and quarters. Pineapple can be served in circles or rings, semicircles, chunks, and crushed. Bananas can be cut in half lengthwise or crossways, sliced into thick or thin slices. Carrots can be sliced into circles, or sticks, diced into cubes. Potatoes can be sliced lengthways, crossways, into sticks, or diced into cubes. Celery sticks can be cut into long or short lengths, or sliced diagonally. The tops are also good.

Often simple cooking experiences can be tied in with regional or cultural specialties — sorghum spread on biscuits or corn bread, poke salad, snow ice cream, fresh huckleberries, fresh chili peppers, and so on. Our hope is that each parent, each day care mother, each teacher, will use these as a beginning for many more cooking — and learning — experiences.

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How To Organize and Proceed

Behind the hubbub and fun an observer can see that cooking with children is a structured learning situation. The adults in charge as well as the children must understand that directions must be followed, the sequence of activities adhered to, safety precautions observed. Time must be allowed for preparing, executing, and cleaning up. Most of all, a calm, relaxed adult must provide steady, but not intrusive, supervision. He or she should enjoy the experience!

Involving children in cooking projects is what scares off many adults. "It's just one more thing to do and I've already got too many things to do." "One teacher and thirty children *cooking?*"

Yet most of these objections can be overcome by careful planning and organization. Some guides compiled by teachers, mothers, and childcare workers who have worked with children successfully (and sometimes unsuccessfully) to prepare, cook, and eat food are given here. The guides will have to be modified, augmented,

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and made specific to fit each situation. A teacher and aide with 15 four- and five-year-old children will have different specific guides than will a first grade-teacher with 28. The situation is different, and so are the capabilities of the children. A parent encouraging a child to cook at home and a family day-care mother with five children of varying ages present still other situations. General guidelines are given in two following sections. One applies primarily to working with groups of children in an early childhood center or a classroom, the other working with an individual child or small group of children in a home.

AT SCHOOL: DO AHEAD OF TIME

- Check school or center policies and state laws concerning cooking projects. There may be no restrictions, but find out now — before you get a pot boiling and all the children excited!
- Be sure to go through the children's school records for notes concerning allergies, other diseases such as diabetes and cystic fibrosis, and double check with parents.
- What arrangements can be made about cooking costs? Teachers should have a small budget for these projects, but too few do. Might the PTA, parent advisory councils, room mothers, special event funds, or the snack budget be sources? Can children bring a small item from home for the recipe? (That makes it more personally "theirs," too.) If you take time and thought to explain to your administrators and the parents about how cooking fits into the total program and how much learning will take place, you may well enlist their support and financial aid. Spread the word that your class will be preparing food throughout the year, and that you would appreciate knowing sources of inexpensive food items in quantity. Enlist the aid of the food-preparation people. They may have extra food items perfect for your uses. In many early childhood centers and elementary schools, close cooperation between food-preparation staff and teaching staff is possible. This arrangement is ideal.
- If some or all of the children have had prior group experiences in cooking in a day care center, nursery school, or an earlier grade, find out about these. Inquire about purposes and objectives. Seeking out and building upon this kind of continuity will help the children and enable you to proceed with projects you might have thought too difficult. Don't be deterred if you find that an earlier teacher has prepared some food you had hoped to. Were the goals and emphases the same? This year the children may prepare the same food, but with different objectives, procedures, and emphases. It takes many experiences to develop a concept. Next year a teacher may appreciate knowing what *you* have done.
- Select the suggestion, recipe or recipes that will achieve the desired objectives. Older children can help decide what to cook. That way the project will more truly be their own. Be sure to try a recipe at home first to know that it works.
- Make sure all necessary equipment is available and ready. If you don't have a kitchen available (few schools do), a small utility cart can become your kitchen on wheels. Cover the top shelf of the cart with a heat resistant material so that cooking can take place there, as well as on a table or counter. A hot plate, electric skillet,

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electric roaster, or other needed appliances go on the top shelf, too. The other two shelves provide storage space for mixing bowls, measuring spoons and cups, stirring spoons, pans, can opener, paper towels, a spray container of diluted detergent, a package of tongue blades for "tasters," cutting boards (try small ones made from scrap hardwood picked up at the lumber yard), potholders, and other equipment. A *heavy duty* extension cord should be included. One kind of utility cord has a convenience outlet for small appliances that reduces the danger of the appliances getting pulled off. Include sponges and cloths for cleanup. If your room has no sink, a couple of plastic pails or pans of water and plenty of paper towels will substitute. Clear glass or plastic containers and bowls for measuring and mixing let the children see what is happening. Wooden stirring spoons will not conduct heat to small hands.

If a utility cart is not available, a box or tray will do. Older children can help decide what equipment will be needed and take responsibility for supplying at least the lighter items (perhaps with some backup items in case of illness or a sudden lapse of memory). The process of going through the recipe with the class and deciding what equipment will be needed is a real problem-solving opportunity. Teachers may have to bite their tongues while waiting for someone to figure out "Hey, we've got to have something to mix it in!", but the joy of letting the children solve the problem themselves is well worth it. The ingredients, after all, are listed, but usually needed equipment must be inferred from the ingredients and the cooking process to be used.

- Make an equipment check before starting a project.
- When a trip to the grocery store, a farm, or a food-processing facility precedes cooking, develop plans so the children will associate the two activities. For instance, select pumpkins at the farm and let the children hold on to them on the way back to school. Take Polaroid pictures of the food-processing plant you visit and later post them by the food being prepared. Or tape record the visit on a little portable recorder and play it during the cooking. See if expeditions are possible to find and bring back stalks of wheat, if you have breadbaking in mind; cornstalks if tortillas are scheduled; peanut plants if making peanut butter is your goal.
- Decide ahead of time how to handle the actual preparation and cooking. Cooperative planning, involving teacher, aide, volunteers, and other adults is best. Ask yourself these questions:

—Shall we try to involve all the children all the time? Use small interest groups? Have two or more identical activities going and assign children to a particular group? Let them come and go as they please?

—Shall we try to get clean shirts to use as aprons?

—If we need extra help, what about older children, high school or middle school home economics, family life, or education-for-parenthood students? Can you count on parents (both sexes), grandparents, room mothers, or other volunteers?

—What problems are likely to arise, and what can be done to avoid them? Before any cooking experience is planned, adults should know the children involved and the setting well enough to think through what is likely to happen. Will the normal flow of traffic be changed? What about the youngster who can't sit still for a minute? How about having older youngsters plan to make "caper charts,"

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listing the jobs each child will do during the cooking activity? Will you have everyone work at the tables or on a counter? How will children manage taking turns? How to arrange so children don't wait too long for turns? Repeat the experience several times? Have the experience in a learning center so children can come and go? Have two or three tables? Have three knives for chopping? Two egg beaters? What about the youngster who needs close supervision? How can we help the youngster who is hesitant to become involved? What safety rules will need to be carefully observed? What language will help bring out the desired learnings?

- Mentally go through each step and develop a plan. For very young and inexperienced children, planning must be done primarily by the adults. Older children can do much of their own planning if they are given some help and guidance.
- Make a record of decisions you and the class make to help brief individuals later on. If children have committee assignments, a written impersonal record helps remind them. Plans may be changed, of course.
- Teachers working alone with 25 or 30 children must be well organized, in order to maintain supervision and interest. One teacher working alone had children arrange themselves so all could see and get to the various work tables, the sink, and also the recipe chart and chalkboard.
- Don't feel compelled to make a recipe chart for every food experience. However, older children using complex recipes will learn more and make fewer mistakes if the recipe procedures are posted before them. The recipe should be transferred to a large chart or to the chalkboard, preferably while the children watch, so they can question new ingredients or vocabulary they may not comprehend. The chart might look like the one on page 17.
- Prepare a *classmade* list of ingredients needed and equipment and utensils required and how they will be secured. Post it where all can see it. A table (or the kitchen cart) below the charts will provide a gathering place for the needed items, and will give the children a chance to examine them. Pans, spoons, and cups will need to be washed again, but that is part of the learning process. Explain that ingredients requiring refrigeration cannot be placed out, of course. Some extra items should be available in case of nonretrievable spills.
- Whether or not elaborate class planning is done, talk over procedures with the children ahead of time. Be as specific as possible as to what they can and cannot do, what procedures will be, and what the results will be.

COOKING EXPERIENCES IN THE HOME

A world of difference exists between cooking with children at home and at school. At home, fewer children take part in the cooking but more distractions enter in — the telephone rings or the baby cries. The adult usually does not command the same attention or authority. Some mothers tend to have high expectations of their own children and take it personally if things don't go well or if the youngster loses interest part way through. Always other responsibilities are waiting. On the other hand, available time is more flexible. You can go to the store almost any time — sometimes even for ingredients in mid-recipe. If a dairy, poul-

00013

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try farm, or other source of food is nearby, going doesn't require extensive field-trip planning, although with several young children, it may seem like a field trip! Also, although cost must always be considered, what is being cooked will be a part of family food expenditures, not in addition to them. And needed equipment is readily available.

Involving young children in helping do what the adult is going to be doing anyway is frequently a good way to keep them out of trouble, out of your hair, and into learning with and about food. Give them a bit of biscuit, bread, pie, or tortilla dough to pat, roll, or shape. Hamburger or meat loaf tastes better if a child-sized patty or loaf has been shaped by the one who is going to eat it.

Schedule real preparation and cooking experiences for a time when other responsibilities are least likely to intrude. Cooking with children almost always takes longer than expected, so allow for that.

If children ask to help cook at a bad time, don't feel guilty if you have to say "Not now." But do schedule some "help" time as well as some of the special cooking experiences suggested in this book.

Usually cooking experiences in the home are not so carefully planned as those in a center. Nor need they be, with only a few children to consider. But even in a home setting, children have to know something of what they are making, how they are going to go abaout it, what they can or cannot do. So you can shorten the planning time, but don't omit it altogether. Children frequently get into trouble just because they don't know what they are expected to do.

Supervision during cooking is essential with one child or thirty, not only for safety and control (leaving one or two young children alone with flour, cereal, water, or other ingredients can only result in chaos), but also for the talking about and talking with so necessary for learning together. Part of the reason children want to cook is to be with that adult who is so important in their lives. Children can learn all the things listed in the "Learnings from Cooking"section of this book as well at home as they can at school.

Some special problems arise in helping young children cook at home. The work surfaces in kitchens are designed for adult height, not for children. A wide-based stool or upside-down wooden box (the kind used to deliver milk to supermarkets works well) will safely raise a young cook to a height suitable for manipulating tools and handling food.

Children are not so inclined to help clean up at home as they are at a center or school. Perhpas you could schedule cooking experiences for a time when the kitchen is going to have to be cleaned anyway. Classroom techniques for encouraging cooperative clean-up work at home, too. Avoid scolding, praise efforts, provide interesting and effective cleaning tools (spray container with diluted detergent, sponge, brush, mop), and work *with* the children, letting them do as much as possible.

Enjoy eating the finished product. Some failures will result, but even the best cook has failures. We all remember sugared fudge spread on crackers longer than the perfect batch! Many favorite family stories come out of cooking disasters. And both failures and successes can be memorable learning experiences in a happy, relaxed, warm atmosphere.

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Preparation and Cooking

Make sure all hands and work surfaces are clean. Show children how to "really scrub," then let them do it. Brushes and big sponges help. You need not scare children about getting sick from dirty hands — just present the washing-up as one step in the food preparation process.

Follow plans you have made earlier, giving supervision and help as needed. When the unexpected occurs — as it will — keep calm and help the children handle it. *"Marcy knows how to clean up the water she spilled. It won't hurt anything."*

In supervising and guiding children, tell and show them *what to do* in positive terms instead of giving vague admonitions or telling them what *not* to do.

Say, *"Carry the pan with one hand on each side, like this,"* instead of saying *"Now don't drop it"* or *"Don't spill."*

Show the child how to use the knife and say, *"Hold the banana at one end, so your fingers are not close to the knife,"* instead of saying *"Be careful!"* or *"Don't cut your fingers!"*

Say *"Keep the egg beater in the meringue while you are turning the handle,"* instead of saying *"Don't lift the egg beater."*

Say *"It's Jack's turn now. You'll have a turn as soon as he has twenty-five strokes. Let's help him count,"* instead of saying *"It's not your turn."*

Say *"Use a potholder to keep from burning your hands on the pan,"* instead of saying *"Watch out; that's hot."*

Say *"Spoon the flour into the cup, then use a knife to level it off, like this,"* instead of saying *"Measure the flour carefully."*

Also be sure to acknowledge and praise what the children do well. *"Gloria really knows how to tear lettuce." "Look at the way Joe turns the food grinder." "Mm-m, that soup smells good. You children are good cooks!"*

Guide the discussion and talk toward the desired objectives, but don't try to restrict it to that. Much free conversation is both effective and desirable.

Involve the children as much as possible. Direct involvement will help sustain interest and attention. Cooking should *not* be a demonstration by the teacher.

00015

Maintaining Interest

Encourage the children to taste. It's an integral part of the cooking process, and a great way to arouse cooking curiosity and to maintain interest. In preparing some recipes children can taste and smell each ingredient separately before it is added (some extra amounts may need to be provided for that purpose), and again after it is mixed or cooked.

Powders, granules, flours, and meals can be put in a small pile on each individual napkin and tasted with the fingers. In tasting while preparing fruits and vegetables, small hands serve as the best utensils for tasting. Tongue blades or ice-cream-bar sticks make excellent tasters. Each child has his own and is not likely to end up with more than his share of a taste. They are perfect for such things as bravely tasting plain cooked pumpkin, then trying it again after sugar, nutmeg, and cinnamon have been added. Tasting liquid gelatin is simple if each child has his own paper cup with his name on it. The children are free to taste the liquid, and to discuss the fact that the more they drink, the less gelatin they will have after it jells!!

Encourage children to talk about what they and others are doing. This helps keep attention and enables children to learn what was intended. Letting children solve the problems they encounter as they proceed will also keep interest and the level of learning high. For example, one first-grade class had blended milk into softened cream cheese to make a spread for whole wheat bread. The plan was to make several variations by adding chopped nuts, olives, pimiento, or raisins. Each group had one big bowl of spread and wanted to prepare some of each kind of flavored spread. What to do?! The children figured out how to divide the flavorings and divide the spreads -- no small problem. Tongue blades were perfect for mixing and spreading — and great for one last lick!!

Reading or telling a related story, or making up a chant or song about the actions or activity -- *"This is the way we knead the bread . . . . . "* *"shake the juice . . . "* *"chop the nuts . . . "* — will help if there is a short interval of waiting. If the children are going to write the recipe to take home, waiting time can be used for that.

Don't underestimate children's interest in even the simplest cooking process — if the children are doing it themselves. "Boiling" eggs may be old stuff to grown-ups, but youngsters find this change of form fascinating. Let them see a raw egg first. Break one open. Let each child put an egg in cool water and watch the changes that take place as the water begins to boil. Let them see a soft-cooked egg and a hard-cooked one. Note the smell of the eggs, and the change that has resulted when you try to crack the egg once it is hard-cooked.

Snacktime is more interesting to children if they help prepare the tables, serve the food, and clean up. Children enjoy being involved in *all* aspects of food experiences, not just being fed.

Time To Dine

Eating is one of the most satisfying parts of the cooking process. Adults need to join in and savor the product along with the children, with much praise for the work done as well as the end result. Try to time the eating so that it does not spoil

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the children's lunch or dinner — whether they go home or stay at school. If eating does come close to a meal, make it something that can count as a "first course," such as juice, soup, fruit or vegetable salad, or fruit compote. The teacher who serves the children cake or cookies at 11:15 a.m. because that is a convenient time is subverting home and school efforts in nutrition education.

Dividing up and serving offer more learning opportunities — both social and mathematical. Older children can solve these real-life problems with a little help from the teacher. One teacher commented: "We discussed how the loaves of pumpkin bread should be cut to serve our class, as well as people throughout the building with whom they wished to share. Chalkboard work made the division a visual activity — very necessary when talking about as many as 50 slices."

Younger children can solve simpler problems. *"If we have 15 children and 2 teachers, how many bowls will we need for fruit salad?" "The apples we have left won't provide thick slices for each of you. What could we do so you could each have one more slice?"* The opportunity to invite guests to share what has been made is a real thrill for young children. The also enjoy taking home a sample of the product and the recipe.

Cleanup

Cleanup is a class activity, and will be entered into with enthusiasm if it is planned for, the work divided and made interesting. Young children thrive on water and soapsuds and "doing it myself." Duties should be clearly assigned — with not too many children trying to work in one place. Work charts may help. Sometimes it works well to have a relatively small group clean up while the other children do something else. Don't try to hurry the process, and *don't* do it yourself. An adult should be close to supervise and lend a hand or give verbal guidance as necessary.

Younger children appreciate someone's working along with them to show them how. "Squeeze the water out of the sponge like this." "Wipe both sides of the pan with the dish towel." Acknowledgment of efforts along the way will help keep children working until the job is done.

What Was Learned?

Evaluation is a final step. Were the objectives achieved? Did they learn something good about foods and nutrition and eating? If not, why not? What went well? What went wrong, and why? What did individual children seem to get out of it (*I've never heard Chuck talk so much and so freely before. He used at least three full sentences.*")?

If the activity is short, it can be recorded on an audio tape for later — and finer — analysis. Critical portions of longer experiences can be taped for evaluation.

Older children should be involved in evaluation — their analyses and insights will assist them in the planning aspects of the next cooking experience. Younger ones can begin short, informal evaluatons in response to questions. *"Did you like making applesauce? What did you like about it?"*

A written account of the experience can be placed in a resource file of tried and true experiences and recipes, including which ones *not* to try again. Notes about procedures that did or did not work will be helpful the next time around.

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What To Cook?

Cooking experiences can be very simple. Spreading soft cheese on a wheat cracker is a cooking experience when you are three years old. Any recipe or project must be evaluated with some or all of the following criteria. In either home or school, these questions should be asked:

- Will the cooking experience achieve the desired objectives?
- Will the project contribute to improved nutrition education and eating habits?
- Is the project or recipe simple enough that children and adults will have a successful and enjoyable experience without undue frustration?
- Is it appropriate for the age, development, maturity, and experience of the children? Can it be safely made by the children? Remember that social capabilities must be considered as well as cognitive and physical maturity.
- If purchase of food is involved, is the expense reasonable?
- Will the cooking experience help achieve a balance of nutritional examples? Avoid the tendency to use too many sweets.
- Will it be interesting to both children and adults?

In any group setting, these additional questions should be asked:

- Will it be an integral part of other planned learning experiences, not an isolated activity?
- Can children bring some of the ingredients from home without hardship?
- Are needed equipment and supplies available or can they be obtained?

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Recipes Using Unique Equipment

Worth considering for use with children are recipes using unique equipment. Many of these appliances come with their own recipe books which should be consulted. Frequently new items of portable cooking equipment appear on the market, such as toaster-ovens, blenders, slow-cooking crockery electric pots, electric skillets and mixers, and broilers. Children have sometimes seen these gadgets advertised; parents may have received one as a gift (Maybe a parent would bring one and help cook). The method of cooking with them is sometimes novel, and children who do not see these items at home may benefit from learning the names and seeing them used.

Some equipment that is old to teachers and to the writers and illustrators of children's books may be totally unfamiliar to children whose cultural, ethnic, and economic backgrounds differ from the majority. We do not mean to imply that every home or classroom needs these gadgets, but that it is fun and educational to try them, as well as special tools from a variety of cultures.

On the other hand, many young children and sometimes their parents have not used simple hand tools, such as a hand food grinder, rolling pin, flour sifter, mortar and pestle, hand juicer, or egg beater. Working with these tools gives children great satisfaction because *child* energy is providing the power.

Recipes From Specific Cultures

We have included a few simple recipes definitely identified with some of the specific cultures that are a part of our rich cultural heritage. Others can be found in any cookbook, but the best approach is to ask a local good cook who is from the culture. Regional variations and adaptations are as "authentic" as a recipe straight from the old country.

Using These Recipes

The next section of this book contains a number of recipes and suggestions that have been successfully used with young children. The recipes are "family size" for approximately four to six people unless otherwise noted. Adjustments for group situations should be made accordingly. The recipes are examples of what can be prepared and cooked while following the principles of good nutrition.

In selecting these recipes, we have tried to be realistic about what adults actually cook with children. There are few meat recipes for example, but if the budget can stand it, the children will enjoy them.

We have avoided putting ages or grades beside each recipe. The maturity and ability of the children involved is your best guide to appropriateness. Probably no nursery group will want to make apple butter because of the heat of the liquid, for example, but older children should be able to with proper supervision.

Because so few classrooms have complete kitchens available to them, we have indicated the type of cooking preparation necessary for each recipe at the top left-hand side of the recipe. "No cooking," "electric skillet," "hot plate and sauce pan," and so forth will help you decide at a glance if you have the facilities to proceed further. At the lower left of the recipe is a list of the utensils most people will use to prepare the food, such as "can opener, cutting board, and knives." If you do not have all these items available, some substitutions can be made.

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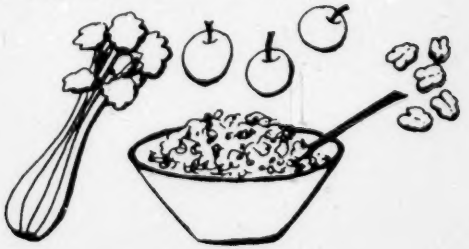
Recipes

WALDORF SALAD

3 diced
3 diced
½ walnutmeats
½ mayonnaise

Wash celery and apples. Core apples but do not peel. Dice celery and apples. Chop nuts.

Fold into mayonnaise, celery, apples, and nuts. Eat immediately or chill a few hours.



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Fruits

No Cooking

FRIENDSHIP FRUIT SALAD

This actively teaches more about cooperation than any book.

Let each child who can bring a piece of fresh fruit from home. Wash, pare and core as necessary, and chop fruit. Slicing bananas, apples, and pears into orange juice will keep them from darkening while the other fruits are being prepared, and also serve as a salad dressing. Be sure the group learns the names of the fruits.

Bowl, knives, cutting boards.

No Cooking

WALDORF SALAD

You may prefer to call this "apple and celery salad."

1 cup diced celery
1 cup diced apples (no need to peel)
½ cup walnut or pecan meats
½ cup mayonnaise thinned with 2 tablespoons cream

Fold celery, apples, and nuts into the dressing. Eat immediately or chill a few hours.

Knives, cutting boards, bowl, measuring cups.

No Cooking

AMBROSIA

Try this after you've opened a fresh coconut.

1 cup each 3 fruits (raisins, oranges, bananas, apples, grapes, or others)
1 cup coconut (grated)

Slice fruits, mix in bowl, spinkle with grated coconut.

Measuring cup, bowl, cutting boards, knives, grater.

No Cooking

BLENDER APPLESAUCE

3 apples
¼ cup honey

With young children, adults may need to peel the apples, but allow the children to chop them into small pieces. Put these small pieces into a blender, add water and honey, judging these amounts by the kind of apple you are using. Allow the children to push the "on" and "off" buttons. This applesauce must be eaten immediately because it won't keep.

Blender, cutting board, knives, vegetable peeler.

No Cooking

HAROSET — PASSOVER TREAT

Good any time. A perfect introduction to the use of a grater. Serve with matzoh.

¼ cup honey
3 apples
½ cup nuts finely grated
½ teaspoon cinnamon
Small amount of juice to "bind"

Peel and grate apples, mix with other ingredients and serve.

Grater, measuring cup, knives.

No Cooking

FRUIT BALLS

A "made with love" Christmas gift to take home or share.

1 cup raisins
1 cup dates
1 cup figs
1 teaspoon orange rind
1 teaspoon orange juice
½ teaspoon cinnamon

Grind all ingredients together and roll into balls.

Variations: In case some of the fruits are hard to get, or to suit individual tastes, other dried fruits and flavorings can be substituted.

Use dried apricots with coconut (1½ cup, apricots ½ cup shredded coconut).
Use 1½ cup raisins with ½ cup peanuts.
Add pitted prunes, dried apples, candied pineapple or cherries, citron, various nut meats or seeds, etc. (If mixture is too dry, add more lemon or orange juice.)

Bowl, spoon, measuring cups and spoons, food grinder.

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HOT PLATE AND SAUCEPAN

TOMATO ASPIC SALAD

Most children are used to jellied fruit salads. This is different, and a nice change from tomato juice.

2 cups tomato juice
1 envelope unflavored gelatin
¼ teaspoon salt

Soften gelatin in ½ cup tomato juice. Add the remaining hot tomato juice, and stir until the gelatin is dissolved. Chill until set. Serve plain or with a bit of mild mayonnaise. Seasonings or solid ingredients may be added. Try lemon juice, chopped parsley or basil, a dash or Worcestershire sauce or hot sauce. Chopped vegetables such as celery or cabbage are good.

Measuring cups and spoons, stirring spoon, pan for chilling.

NO COOKING

WHIPPED CREAM FRUIT SALAD

This is so good that fifteen small children have been known to eat a double batch.

½ pint whipping cream
1½ cups seeded halved tokay grapes
(1 can seedless canned white grapes can be substituted.)
2-3 medium bananas, sliced
1 cup miniature marshmallows
2 medium apples, diced

Chill thoroughly bowl, beaters, cream. Prepare fruit. Whip cream, letting children take turns. Fold in the fruit. Ready to eat immediately. Adults may have to take out the grape seeds ahead of time if the children are young — or use seedless grapes.

Knives, cutting board, bowl (large), bowl for whipping cream, egg beater or electric mixer.

HOT PLATE

APPLESAUCE

A "Must" after a trip to an orchard. Have pictures of the trip and of apples up nearby. Use two or three food mills or strainers so children don't wait too long for a turn.

3 apples (tart)
¼ cup honey

Wash apples and cut into quarters. Place in saucepan with just enough water to keep apples from scorching. Cover. Cook slowly until tender. Strain and add honey.

Slicing knives, cutting boards, saucepan, measuring cup, strainer or food mill.

PARTIAL COOKING

FRUIT JUICE GELATIN

A vivid example of change from liquid to gel, and of the effect of temperature on certain foods. Let children predict whether fruits or vegetables added to the liquid will sink or float — then find out.

1 envelope unflavored gelatin
2 cups fruit juice (orange, pineapple, or grape juice)
pinch salt

Sprinkle unflavored gelatin on ¼ cup cold juice to soften. Heat one cup fruit juice and add to the softened gelatin to dissolve it. Add remaining juice and salt. Place in refrigerator until set.

This gelatin dessert is much more nutritious than presweetened gelatin desserts. It is also much more delicate in flavor. Experiment with a combination of blends of juices to see which your family or class likes best. Fruit can also be added.

Pan for heating water, measuring cups, stirring spoon, pan for refrigerating.

NO COOKING

CANDLE SALAD

Be sure to have a candle and candlestick (or at least a picture) on view so children know what they are making. Today's children might prefer to call this a "rocket salad." Let them make it and then decide.

A pineapple ring on a lettuce leaf is the candlestand. A half banana standing in the ring is the candle, and a maraschino cherry on top is the flame.

Can opener, cutting boards, knives.

NO COOKING

FRESH COCONUT

Drill "eyes" from coconut and pour out liquid. Break coconut with hammer, and break into smaller pieces for ease in handling. Pry meat from shell and cut into child-sized portions. Good "as is," or to compare with commercial shredded or flaked coconut.

NO COOKING

COCONUT MILK

Coconut milk is extracted from grated coconut and should not be confused with the watery liquid found in a mature coconut. Coconut milk is easily made by either of the following methods:

(1) Fresh Coconut — Pour 2 cups boiling water over 4 cups freshly grated coconut. Let stand 20 minutes, stirring occasionally. Strain through a double thickness of cheese cloth, pressing hard to remove all liquid.
(2) Prepared Coconut — Pour 2 cups milk over 1 can or package of coconut. Slowly bring to a boil; remove from heat and let stand 20 minutes, stirring occasionally, strain through a double thickness of cheese cloth, pressing to remove all liquid.
(3) Coconut milk can also be purchased frozen.

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No Cooking

BUTTERFLY SALAD

Have a picture of a butterfly nearby so children can make the association.

Place on a lettuce leaf a pineapple ring cut in two with the halves arranged to look like a butterfly's wings. Place a sliced stuffed olive in the middle for the butterfly's body.

Can opener, cutting boards, knives.

Hot Plate

HAUPIA (Coconut Pudding)

A Hawaiian recipe. (How-pee-ah)

½ cup cornstarch
3 tablespoons sugar
1/8 teaspoon salt
2 cups coconut milk

Combine dry ingredients. Add ½ cup of the coconut milk and blend to a smooth paste. Heat remaining milk on low heat in a double boiler; add cornstarch mixture, gradually, stirring constantly until thickened. Pour into square, shallow pan; let cool until firm. Cut into squares and eat with fingers.

Double boiler or heavy saucepan, stirring spoon, measuring cups.

Electric Skillet
or Hot Plate and Skillet

SAUTÉED PINEAPPLE

A simple but deliciously different way to serve pineapple. Good alone, or with pork or poultry.

Slices of pineapple canned in its own juice
3 tablespoons butter

Drain pineapple well (otherwise the fat in the skillet may spatter dangerously). Saute in the butter until hot throughout, and brown slightly on each side.

Can opener, pancake turner.

Electric Skillet or
Hot Plate and Skillet

"FRIED" APPLES

Excellent plain, or with bacon and cheese on the side.

6 tart, well-flavored apples
2 tablespoons butter
1/8 teaspoon salt

Saute cored and sliced apples gently in melted butter. Cook covered over low heat until nearly tender. Uncover, salt lightly, and cook until tender. Add more butter as needed, or a little hot water if the apples are dry.

Ripe, firm peaches may also be prepared this way.

Cutting boards, knives, spatula.

Hot Plate

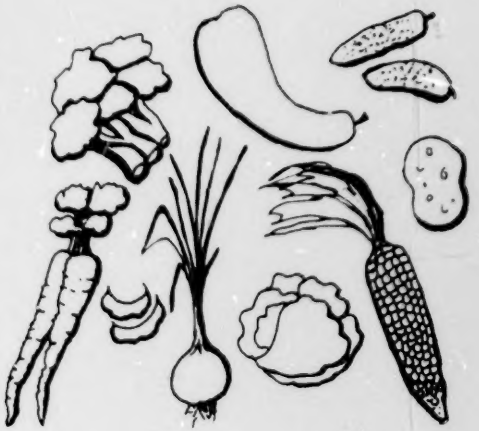
COOKED FRUIT

Most fruit is so good uncooked that we sometimes forget how delicious freshly cooked fruit is — either warm or chilled. Learn the names of the fruit, taste, and feel the texture before and after cooking to find out what changes take place.

3 to 4 cups sliced fruit
Water to a depth of about 2 inches (The fruit adds its own).
Cook gently until nearly tender. Add ½ cup sugar (to taste).
Cook until tender.

Most fruit can be cooked unpared. The skin adds flavor, color, and retains vitamins. Exceptions are oranges, tangerines, pears.

Sauce pan, knives, cutting board, stirring spoon.



Vegetables

No Cooking

LAZY SUSAN VEGETABLES

Wash, peel, and slice an assortment of fresh vegetables. Arrange them and some cooked vegetables on a lazy susan. The children close their eyes, turn the lazy susan, then taste whatever stops in front of them. A good way to use up bits and pieces of vegetables. Finger fruit could also be used.

Cutting board, knives, vegetable peeler, can opener, lazy susan.

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No Cooking

BEAN SALAD

A good classification experience. They are all beans, but of different varieties.

1 can green beans
1 can yellow wax beans
1 can kidney beans
1 can garbanzo beans

Drain beans, toss with bottled Italian dressing. Chill at least 1 hour.

Can opener, bowl, spoon.

No Cooking

TOSSED SALAD

The experience is even more fun if the children shop for the ingredients. Makes a good language lesson!

Lettuce, romaine, watercress
Radishes (red and white)
Tomatoes
Onions
Salad Dressings

Any salad vegetable is suitable — try spinach, alfalfa sprouts, celery, carrots, endive, red cabbage, cauliflower, and so on. Have children wash and drain all vegetables. Children can tear lettuce and cut other vegetables, then "toss" the vegetables to mix. Serve with one or two salad dressings, or plain. Let children taste dressing before choosing.

Cutting board, knives, large bowl, large salad fork and spoon.

Electric Crockery Cooker or
Hot Plate and Heavy Saucepan

WINTER VEGETABLE SOUP

1 can green beans (regular size)
1 can lima beans
1 can peas
2 cans corn
3-4 cans tomatoes
4-5 potatoes
1 large onion
4 carrots, diced
3 cans boullion or stock from soup bone

Divide children into committees — can openers, strainers, vegetable peelers, cutters. (Use sturdy plastic knives — they work! — and vegetable peelers.) Heat the broth and with adult assistance put all ingredients into the cook pot or saucepan and cook until potatoes and carrots are tender.

Variations: Browned hamburger can be added. Alphabet noodles can be put in pot for last few minutes of cooking.

Cutting boards, knives, can opener, vegetable peelers, stirring spoon.

No Cooking

PICK-UP-STICKS

Use each vegetable alone as a snack to make sure children know the names; then use several at once and let the children choose.

Scrub fresh vegetables — the children can do this with a brush or a plastic scrubber. Cut into sticks, using knife and cutting board. Dip into cheese dip, cream cheese or cottage cheese thinned with milk, or sour cream. Try potatoes, zucchini or other summer squash, carrots, celery, turnips, cauliflower, or other raw vegetables.

Cutting boards, knives, serving plate.

Electric Crockery Cooker or
Hot Plate and Heavy Saucepan

FRIENDSHIP SOUP

If each of us does a little look what we can do!

Let each child who can bring a fresh or canned vegetable for soup. Pare or scrub according to what the vegetable is. Dice and add to seasoned beef stock to cook, adding the vegetables according to the time they need to cook. Stock can be made from bouillon cubes or soup bones.

Knives, cutting board, can opener, wooden stirring spoon.

Electric Skillet or
Hot Plate and Saucepan

QUICK CABBAGE

Add a little more water, shredded onion, and have cabbage soup.

1 head cabbage, shredded
2 bouillon cubes
water to cover cabbage

Shred cabbage, letting the children take turns with several shredders or graters. Dissolve the bouillon cubes in water in the skillet. add cabbage, and cook until tender. Be sure to have several graters if more than four or five children are involved.

Grater or shredder, stirring spoon.

SOUPS

Soups are especially good to cook with children because they never fail, time and exact measurements are not critical, and a small portion can be served as a "first course" as well as a snack.

Try out one of the new slow cooking electric crockery cookers if you can get one. The soup can be started one day, cook all night, and be ready for the quicker cooking ingredients to be added the next morning. These devices also do not have to be carefully watched. But soup can be cooked in any sort of a pot — just follow directions.

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ELECTRIC SKILLET OR
HOT PLATE AND SKILLET

SAUTEED VEGETABLES

2 cups shredded fresh vegetables
3 tablespoons butter or cooking oil
½ teaspoon salt

Shred, grate, or slice thinly a fresh vegetable such as carrots, zucchini, summer squash, potatoes, celery, or cabbage.

Cook in oil or butter just until done, turning often. Salt lightly and serve. Vegetables prepared this way cook in a very short time, so children don't have long to wait.

Cutting board, grater or shredder, knives, spoon or spatula for turning.

ELECTRIC CROCKERY COOKER OR
HOT PLATE AND SAUCEPAN

SPLIT PEA SOUP

½ cup dried split peas
2 quarts water
1 medium sized onion, diced
½ cup celery leaves, diced
1 carrot, diced
1 potato, diced
Salt and pepper

Soak peas in water overnight. Add onion, diced, and cook until peas are tender. Add more water if necessary. Season with salt and pepper. Rich milk can be added just before serving. Smoked ham or a ham bone may be cooked with the peas.

If a crockery cooker is used, follow the directions that came with it.

Measuring cups, knife and cutting board, ladle for serving.

HOT PLATE, SAUCEPAN AND
SMALL SKILLET

CORN CHOWDER

Better than cocoa on a cold and windy day.

1 11-ounce can condensed cream of mushroom soup
1 #2 can (2½ cups) whole-kernel corn
4 cups milk
1 small onion, sliced
1 tablespoon fat
½ teaspoon salt
Dash of pepper

Brown onion in hot fat. Combine soup, corn, and milk, add onion. Season with salt and pepper and simmer 15 minutes.

Measuring cups and spoons, wooden spoons for stirring, ladle for serving.

NO COOKING

CELERY SEED CUCUMBERS

Children can predict what shapes the slices will be.

1 quart peeled, sliced cucumbers (Thinly sliced are nice, but if young children are slicing, medium-to-thin are perfectly acceptable.)
4 tablespoons sugar
2 tablespoons cider vinegar
1 tablespoon salt
1 tablespoon celery seed

Add sugar and other ingredients to cucumbers in a covered container. Refrigerate overnight, stirring once to distribute sugar and seasonings. Serve as a salad, or on whole wheat bread or crackers. Kept refrigerated, these cucumbers will keep for several days.

Vegetable peeler, knives, quart container, measuring spoons.

NO COOKING

ALFALFA SPROUTS

2 tablespoons alfalfa seed (use more or less as desired).

Place in a jar, cover with water and soak overnight. Cover top with cheesecloth, drain off water and place the jar on its side with a paper towel over it to cut out the light. Rinse twice a day and drain well. On the third or fourth day expose to the light. The sprouts are ready to eat after the fourth or fifth day. Put in the refrigerator to keep fresh. Serve as a salad vegetable. Especially good with a yogurt or sour cream dressing.

If alfalfa seeds are not available in the grocery store, try a seed store. The seeds are expensive, but go a long way. This is a quick way to demonstrate plant growth, and avoid the frustration of having plants sprout and then die, which often happens when vegetables are planted indoors. Observe changes daily. Mungbeans and soybeans can also be sprouted in this way.

Glass jar, cheesecloth, paper towel.

NO COOKING

PEA SALAD

This is a hearty salad, a good combination of vegetable and protein for lunch or supper, or in between.

1 #303 can peas
1 hard cooked egg, chopped
½ cup cubed cheddar cheese
½ cup diced celery
½ teaspoon salt
½ cup mayonnaise (enough to moisten)

Gently stir ingredients together, chill and serve. Can be eaten immediately.

Can opener, cutting board, knives, bowl, measuring cups and spoons.

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Breads and Cereals

OVEN

ELEGANT GRANOLA

Try this as a snack, or as a topping for fruit.

⅔ cup sesame seeds
½ cup blanched almonds
½ cup shelled sunflower seeds
¼ cup butter or margarine
¼ cup cashews
1 cup coconut
⅓ cup sesame seed oil
4 cups rolled oats
⅓ cup honey
¼ cup currants

Toast seeds and nuts in margarine in the oven for about 15 minutes.

Toast rolled oats in oil the same way.

Mix together, add honey, currants, and bake at 375° for 10-15 minutes.

Cool, break into pieces.

Measuring cups, large baking pans, spoon for stirring.

HOT PLATE, OVEN

EASY GRANOLA

Older children can begin to compare prices, weights, nutrients with the highly advertised ready-to-eat cereals.

1 cup wheat germ
1 cup coconut
2 cups rolled oats
1 cup sesame seeds
½ cup salad oil
1 cup water
⅓ cup honey
⅓ cup brown sugar
1 tablespoon vanilla.

Heat together salad oil, water, honey, and brown sugar. Add vanilla and pour over other ingredients. Stir, pour into jelly roll or roasting pan, and bake 30 minutes at 375°. Cool, serve as snack, cereal, or as topping for fruit.

Measuring cups and spoons, saucepan, jelly roll pan or roasting pan, spoon for stirring.

OVEN OR BROILER

CHEESED BREAD STICKS

Try cutting bread into various shapes — triangles, smaller triangles, squares, smaller squares, oblongs. Any others??

Cut whole wheat bread into strips. Spread with softened butter, roll in grated Parmesan cheese, and toast lightly in oven or broiler. For a variation, roll in sesame seed, poppy seeds, seasoned salts of various kinds. Or spread slices with butter, sprinkle with the seasonings.

Cutting board, knives, spreading knives.

OVEN

PUMPKIN BREAD

The perfect follow-up for a trip to buy pumpkins.

1½ cups honey
⅔ cup corn oil
4 eggs
2 cups cooked, strained pumpkin (canned may be used)
3 cups whole wheat flour
½ teaspoon cloves
2 teaspoons cinnamon
1 teaspoon nutmeg
1 teaspoon salt
1 teaspoon baking powder
Shortening to grease pans

Beat with an egg beater the honey, oil, and egg mixture. Mix in pumpkin.

Sift together the dry ingredients and mix into the pumpkin mixture.

Grease and flour two 5" x 9" loaf pans (or three smaller ones). Pour batter in pans and bake approximately one hour at 325°. Turn out of pan and cool.

Measuring cups and spoons, bowls, mixing spoons, flour sifter, rubber scraper, loaf pans, egg beater.

HOT PLATE

JAPANESE SESAME RICE BALLS

2 cups hot cooked rice
½ tsp. salt
½ cup black sesame seeds

Toast sesame seeds in frying pan. When they pop, add salt. Cook rice according to directions. Roll hot rice into balls, and cover with sesame seeds.

Measuring cups & spoons, saucepan, frying pan.

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OVEN OR
ELECTRIC SKILLET

CROUTONS

A quick and easy way to use up slightly stale bread.

8-12 slices whole wheat bread — not fresh
1 cup butter or oleomargarine
1 teaspoon salt
½ teaspoon seasoned salt, if desired

Cube bread on cutting board, toss lightly with melted butter and seasoning. Bake at 300° for 45 minutes, stirring occasionally, or mix and stir in electric skillet on low heat until crisp. Serve warm or cold. A crisp addition or accompaniment to salads, soups, or vegetables.

Measuring cup, spoon, knife, cutting board.

OVEN OR ROASTER-OVEN

PIZZAS — JUNIOR SIZED

More experienced children can make pizza from scratch, especially after a field trip to the local pizza parlor.

English muffins — cut in half
Tomato sauce
Cooked ground beef
Chopped cooked bacon bits
Chopped green peppers
Sliced mushrooms
Grated cheese

Let each child spread his/her own muffin half with tomato sauce and sprinkle any of a variety of ingredients on top. Supply enough of each ingredient to give the cooks an opportunity to taste while choices are being made. Bake at 450° for about 10 minutes. Sprinkle with grated cheese and return to the oven until cheese melts.

Small bowls, spoons, cookie sheet, knives, can opener.

ELECTRIC GRILL OR
GRIDDLE ON HOT PLATE

FLAPJACKS

The pioneers in covered wagons couldn't carry ovens, but they had bread anyway.

6 eggs
1 cup white flour
1 cup whole wheat flour
1 teaspoon salt
1 cup milk
1 cup cream
2 tablespoons butter
Orange peel

Children can crack and beat eggs. 1 cup milk and 1 cup cream and 1 teaspoon salt can then be mixed into bowl with children taking turns beating. Then 2 cups of flour and 2 teaspoons of the grated peel of an orange. 2 tablespoons of melted butter are added next. (Some of the children can help melt butter in pan on low flame.) Greased skillet is then heated and pancake batter poured onto skillet. Children can flip pancakes over.

Try serving with cooked fruit and cottage cheese instead of the usual syrup.

Mixing bowl, rotary beater, measuring cup and spoons, grater, flour sifter, small pan for melting butter, stirring spoon, pancake turner.

ELECTRIC SKILLET OR
HOT PLATE AND SKILLET

FRENCH TOAST

1 egg
½ cup milk
1/8 teaspoon salt
1/8 teaspoon cinnamon
1/8 teaspoon vanilla
4 slices of whole wheat bread

Beat egg slightly. Stir in milk, salt, vanilla, and cinnamon. Dip bread in mixture on both sides. Fry in melted butter or oil on both sides.

Bowl, egg beater or fork, pancake turner.

HOT PLATE, GRIDDLE, OR
OLD STOVE LID

TORTILLAS

Another bread from our Southwest heritage. Compare with the corn tortilla.

4 cups flour
1 tablespoon baking powder
2 teaspoons salt
4 tablespoons lard or oil
1 to 1½ cups water (lukeward)

Mix dry ingredients. Then add lard or oil and mix until crumbly. Add lukewarm water and blend well. Knead into a big ball and then divide dough into 12 equal-sized pieces and form into balls. Cover with a cloth and let stand about 15 minutes. On lightly floured board, pat each ball flat and roll out into a round tortilla, 8 inches in diameter. Cook on a moderately hot ungreased griddle until golden brown in spots, turning once and being careful not to break air bubbles.

Measuring cups and spoons, bowl, rolling pin, cloth, rolling board.

HOT PLATE, HEAVY GRIDDLE OR
OLD STOVE LID

CORN TORTILLAS

Have some mature corn available and let children shuck (or husk), shell, and try to grind.

1 cup boiling water
1 cup corn meal
1 teaspoon salt

Gradually add boiling water to cornmeal. Stir until thick. Add salt and mix well. Shape into thin flat cakes and bake on ungreased heavy griddle until brown on each side. These used to be baked on hot stones.

The shaping and cooking of tortillas so they stay flat is a real art. If you have not mastered it, perhaps a mother of Mexican heritage could come to show everyone how.

Bowl, mixing spoon.

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OVEN

CORN BREAD

Split, butter, and eat as is, or with a bit of molasses or sorghum.

Mix and sift together
¼ cup corn meal
1 cup flour
¼ cup molasses
3 teaspoons baking powder
¾ teaspoon salt
Add
¾ cup milk
1 egg well beaten
2 tablespoons shortening, melted (Can use butter, bacon fat, chicken fat)

Bake in shallow buttered pan, 8 x 8 inches, at 425 degrees for 20 minutes.

Sifter, measuring cups & spoons, baking pan.

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OVEN

SOFT PRETZELS

Children's imaginations take flight in the twisting and shaping process.

1 envelope yeast
1½ cups warm water
1 teaspoon salt
1 tablespoon sugar
4 cups flour
coarse salt

Soften yeast in water. Mix all ingredients into it and knead. Give each child a ball of dough to roll and twist into any shape (Alphabet letters are fun for new readers!) Lay on greased cookie sheets. Brush with beaten egg and sprinkle with coarse salt. Bake in 425° oven for 12 to 15 minutes.

Large bowl, wooden board for kneading, large spoon, measuring cups and spoons, baking sheets, egg beater and bowl.

OVEN

RYE WAFERS

Food comes from many types of grain — rye, oats, wheat, rice.

½ cup oleomargarine or butter
1 cup rye flour
¾ cup all-purpose flour
1 teaspoon baking powder
1 teaspoon sugar
½ teaspoon salt
2 teaspoons cumin seed
½ cup milk

In mixing bowl, combine all ingredients and mix until smooth. Chill 1 hour. Roll on lightly floured board until very thin. Cut in 3" x 2" rectangles — or in any shape with knife or pastry wheel. Bake on baking sheets in 375° oven 8 to 10 minutes or until browned. Makes about 4 dozen crackers.

Bowl, large spoon, measuring cups and spoons, rolling pin, floured board, knife, baking sheets.

ELECTRIC SKILLET OR
HOT PLATE AND DEEP CAST IRON SKILLET

AMERICAN INDIAN FRY BREAD

For older children to do. One of our heritage ways of making bread.

2 cups flour
1 teaspoon salt
2 teaspoon baking powder
½ cup dried milk
1 tablespoon sugar — if desired
About 1 cup warm water

Mix all ingredients. Pat out into 8 to 9 inch circles about ½ inch thick on floured board. Fry quickly in hot fat until nicely browned. Fat should be just below the smoking point. Dough that is kneaded too much or overhandled will tend to make tough bread.

Measuring cups and spoons, bowl, knives, forks.

OVEN, HOT PLATE

HONEY WHOLE WHEAT BREAD

Baking bread is a grand occasion for those cooking and eating with children. The youngsters — and you — will never forget it! This is the time to call in volunteers — possibly in "shifts."

Generously grease two bread pans

3 cups whole wheat flour
½ cup nonfat dry milk
1 tablespoon salt
2 packages active dry yeast

Combine the above in large mixer bowl

3 cups water
½ cup honey
2 tablespoons cooking oil

Heat in saucepan over low heat until warm.

Put warm (not hot) liquid over flour mixture. Blend at low speed 1 minute, medium speed 2 minutes (or mix by hand for 5 minutes.) By hand stir in 1 cup additional whole wheat flour and 4 to 4½ cups all purpose flour. Knead on floured surface, about 5 minutes. Place dough in greased bowls, cover, let rise 45 to 60 minutes until light and doubled in bulk. Punch down dough; divide in half. Shape each half into a loaf by rolling the dough out to a 14 x 7 inch rectangle. Starting with 7 inch side roll up jelly-roll fashion. Place in greased pan. Cover loaves; let rise 30 to 45 minutes until light and doubled. Bake at 375° for 40 to 45 minutes until loaf sounds hollow when lightly tapped. Remove from pan; cool on wire rack before slicing. Makes 2 loaves.

Bowls, mixing spoons, bread pans, measuring cups and spoons, mixer.

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Meat and Egg Dishes

ELECTRIC SKILLET OR
HOT PLATE AND FRYING PAN

EGGS IN A NEST

1 egg for each person
1 slice of bread for each person
1 tablespoon margarine or oil
pinch of salt

Cut a circle out of a slice of bread. Heat margarine or oil in a skillet. Place the bread slice, minus the circle, in the margarine, crack egg and drop it into the opening. Saute gently until firm, turn and saute the other side. Salt lightly and serve. The cut-out circle can be browned lightly in the margarine at the same time.

Circular cookie cutter, spatula.

HOT PLATE AND FRYING PAN
OR ELECTRIC SKILLET

CHILI CON CARNE

A good class project for a cold, midwinter day.

1 pound ground beef
1 small onion chopped
2 cans tomato soup diluted with 2 cans of water
½ teaspoon chili powder
¼ teaspoon cumin
1 teaspoon salt
1 No. 2½ can kidney beans

Brown meat and onion. Add tomato soup, water, and spices. Simmer until meat is well cooked. Add kidney beans until heated.

Measuring spoons, can opener, stirring spoon.

ELECTRIC SKILLET OR
HOT PLATE AND FRYING PAN
WITH COVER

SUKIYAKI (Japanese)

Serve with Sesame Rice Balls (p. 23)

1 chicken or 1½ pounds beef
1 tablespoon shortening
1 large onion, sliced
1 No. 2 can bamboo shoots
⅓ cup sugar
¼ cup soy sauce
¾ cup hot water and mushroom liquid
¾ cup mushrooms, sliced
4 to 5 green onions, sliced plus onion tops
½ pound or 1 No. 2 can bean sprouts
1 tofu, cubed

Cut meat into bite-size pieces and cook in hot shortening or chicken fat. Add onions, bamboo shoots cut in strips, sugar, soy sauce, and half of the liquid. Allow to simmer gently for about 5 minutes. Add mushrooms, green onions, bean sprouts, and remainder of liquid. Add tofu and cook for several minutes. Serve immediately.

Yield: 6 servings.

Variations: Watercress, green peppers, tomatoes, carrots, turnips, or ginger juice may be added. Tofu is soybean curd, a white cheese-like protein precipitated from the soybeans and then usually pressed into 3 inch cubes. (You can buy it at Japanese food stores. This may be omitted).

Knives, cutting board, stirring spoon.

SMALL CHARCOAL GRILL,
HIBACHI, OR BROILER

CHEESE KABOBS

Fun to do outdoors.

Put cubes of cheese, pineapple, pitted olives, pitted prunes, or other fruits or vegetables on a skewer or wooden stick. Warm on the grill or in a broiler.

Skewers.

NO COOKING

TUNA SALAD

Serve as a salad or as a spread for sandwiches or crackers.

1 6½ oz. can tuna, drained
1 hard cooked egg, chopped
½ cup diced celery
½ cup mayonnaise (enough to moisten)

Mix ingredients, chill and serve. Salmon, flaked and boned, may also be used.

Can opener, cutting board, knives, bowl, measuring cups and spoons.

Both tuna salad and pea salad give opportunities to practice cutting with a knife. If children are going to help cook they need to know how to do this correctly. The first essential is a cutting board. If a piece of hardwood is not available, one can be improvised using several layers of newspapers covered with a piece of waxed paper. If you are not familiar with the cutting techniques described below, practice at home until the tendency to pick up a paring knife and draw the blade toward you, holding the vegetable or fruit in the other hand, is overcome.

Place the food to be cut flat on the cutting board. Rounded foods can have a slice cut off the bottom to give a solid surface. Hold the food with the first two fingers. Place the holding hand on the food so that the first two fingers present a vertical guard wall to the side face of the knife. The fingertips are tucked underneath helping to hold the food. The holding hand gradually moves back as the knife advances. This is awkward for many adults at first, but is much safer. It is essential that childrn cut this way for safety's sake.

Recommendations concerning knives vary. Some people say only blunt knives should be used, but it is impossible to cut many foods with blunt knives. Good quality paring knives can be used by most four-year-olds and up, if properly supervised. Some people use high quality plastic knives. The supervision and the care in teaching the children how to use the tool actually determine the safety.

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HOT PLATE AND SAUCEPAN

EGG SALAD

4 hard-cooked eggs, chopped
½ cup diced celery
1 tablespoon chopped pimento
½ cup mayonnaise
1 teaspoon salt
¼ teaspoon pepper

Combine all ingredients. Makes enough salad for 4 sandwiches, or a generous bowl of dip. For variety, add ¼ cup chopped olives. Omit salt.

Cutting board, knives, measuring cups and spoons.

HOT PLATE

SCRAMBLED EGGS

Whenever a recipe calls for breaking eggs — be sure to allow the children to do it. They can!

3 eggs
1 tablespoon milk
1/8 teaspoon salt
1 tablespoon butter

Melt butter in skillet. Beat eggs until whites and yolks are mixed. Add salt and milk. Pour in skillet and stir until set.

Egg beater, bowl, skillet, spoon.

NO COOKING

PORCUPINES

A good way to learn "half."

Cut orange or apple in half, one half for each child. Have available small cubes of cold leftover meat, cold cuts, cheese, cherry tomatoes, or other vegetables. Children select what they want, put one or two bites on a toothpick, and stick in the fruit. All sorts of creations emerge. Let each child make his own, or a small group can prepare enough for everyone. Eat the fruit, too. Some children like this better than a meat or cheese sandwich. Older children can use the whole orange or apple and make "satellites."

Cutting board, knives, toothpicks.

Milk Products

NO COOKING

BUTTER

When the globules of fat unite and become visible, the cream is said to "break". Note the physical changes — from liquid to solid, from white to yellow. Tell the children, "Cream has butter fat in it but you can't see it because the pieces are so tiny. When we shake it, they rub against one another and join together and become bigger — then all the fat comes together."

1 pint whipping cream
salt

Chill whipping cream until day of use. Take the cream from the refrigerator and let it come to room temperature. Pour into a jar and tighten the lid. Let the children take turns shaking the jar until the butter forms. Then pour off the buttermilk and add the salt, if desired. Spread on crackers and taste.

Transparent jar (with tight lid)

PARTIAL COOKING
HOT PLATE, SAUCEPAN

CURDS AND WHEY

This is tricky. Master the technique at home first.

Pour a carton of milk into a transparent container and let it sit at room temperature until it sours. Let it turn to semi-solid clabber. Scald (but do not boil). It will separate into solid curds and liquid whey. To make cottage cheese, pour into a colander or bag, drain off whey, and add some cream.

Transparent container, saucepan, mixing spoon, colander.

HOT PLATE

BASIC CHEESE DIP

½ cup milk
1 pound cheese cut into cubes
½ teaspoon dry mustard
½ teaspoon Worcestershire sauce
½ teaspoon paprika
1 teaspoon salt

Melt cheese in the milk in the top of a double boiler, or in a pan over *very* low heat, stirring constantly. Add seasonings. Serve warm as a fondue type dip for toast or tortillas. Serve cold as a dip for vegetables or crackers.

Other seasonings (or fewer) can be used. Try adding bits of pimiento, bits of bacon, or parsley. This dip will keep for several days in the refrigerator.

Double boiler or sauce pan, knife, spoon, measuring cup.

NO COOKING

SNOW CREAM

Start with a large bowl of snow. Is there more or less when you're finished? Is it the same color? Same taste?

Mix freshly fallen clean snow with sugar a little milk or "half & half" and vanilla. The amounts needed vary. You and the children taste until it is just right. Serve at once.

Large mixing bowls, mixing spoons.

BLENDER

BANANA MILK SHAKE

Here is the banana, and then it's gone!! Or is it?

1 ripe medium banana
1 cup milk (either skim or whole)
1 teaspoon honey
¼ teaspoon nutmeg

Put first three ingredients in blender with one cup ice cubes and whip 30 seconds. Pour into glasses, dust with nutmeg and serve at once. For a heartier drink, add an egg and/or vanilla ice cream.

Measuring cups and spoons.

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Jellies, Relishes, and Peanut Butter

PEANUT BUTTER SUGGESTIONS

Peanut butter is a children's favorite, and they are sure to enjoy preparing some variations. Try some of these if you serve breakfast or an early morning high protein snack.

1. Peanut butter and sliced bananas, pears, or oranges.
2. Peanut butter and chopped dates, seedless raisins, or figs.
3. Peanut butter, grated carrot, and seedless raisins.
4. Peanut butter and watercress.
5. Peanut butter and pickle relish or sliced olives.
6. Peanut butter, cream cheese, and orange marmalade.
7. Peanut butter and sliced tomatoes or chopped celery.
8. Peanut butter and crisp, chopped bacon.
9. Spread peanut butter on hot biscuits, muffins, or waffles.
10. Spread peanut butter on vanilla cookies or graham crackers.
11. Ants on a Log — Fill celery sticks with peanut butter. Place a few raisins on the peanut butter. Make sure children understand the reason for the name!
12. Stuff dates, prunes, figs, or dried apricots with peanut butter.

90031

No Cooking

CRANBERRY-ORANGE RELISH

A nice addition to a Christmas or Thanksgiving feast, (or just to spread on wheat or rye crakcers). Freeze before grinding, and they will drip less.

1 package fresh cranberries (4 cups)
2 oranges (quartered and seeded)
2 cups sugar

Put cranberries and oranges through a food grinder. Add the sugar and stir well. Chill several hours.

Food grinder, measuring cups, mixing bowl.

SEASONED BUTTERS

A variety of seasoned butters, which children can blend and spread themselves, turn melba toast or "bread 'n butter" into something special. They can also increase sensitivity to the subtle tastes and flavors of the wonderful world of herbs, spices, and flavors.

Exact proportions are not important, but the flavors should not be strong. A light touch with dried herbs is especially important.

Mix butter with parsley, chives, celery, or mixed herbs.
Mix butter with lemon juice, Worcestershire sauce, or a bit of dry or prepared mustard.
Mix butter with a bit of grated cheese, catsup, or chili sauce.
Mix butter with poppy seeds, sesame seeds, or celery seeds, or sprinkle these over the buttered bread. Especially good if heated for a few minutes.
Mix butter with grated orange or lemon peel.

Soften butter or margarine by letting it come to room temperature.

Small bowls and sturdy spoons are the only utensils needed.

Hot Plate, Large Saucepan

GRAPE JELLY

Children can bring small jars or juice glasses from home. This experience is for older children.

2 cups canned or bottled juice
3½ cups sugar
½ bottle fruit pectin

Add exact amount of sugar to the juice and mix well. Place over high heat and bring to a boil, stirring constantly. At once stir in pectin. Then bring to a full rolling boil, and boil hard for 1 minute stirring constantly. Remove from heat, skim off foam with metal spoon and pour jelly into glasses. Seal with paraffin.

Measuring cups and spoons, wooden spoon for stirring, metal spoon for skimming.

No Cooking

NAMASU (Japanese Cucumber Salad)

(Nah'-mah'-soo')

Children in Hawaii enjoy making this salad.

3 cups very thinly sliced cucumbers
½ teaspoon salt
1 teaspoon finely chopped ginger root (or powdered ginger)
½ cup Japanese or white vinegar
2 tablespoons sugar

Partly peel cucumbers leaving strips of green, and slice thin. Add salt to cucumbers and let stand for 15 minutes. Combine remaining ingredients. Press excess liquid from cucumbers and add to sauce. Chill and serve as a relish. Yield: 6 servings. Sometimes thinly sliced mushrooms or carrots are added to this relish.

Knife, vegetable peeler, bowl, paper towels.

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HOT PLATE

APPLE BUTTER

While the apple butter is cooking, have some of the cooks scrub out 15 baby food jars.

4 pounds tart apples
2 cups apple cider, cider vinegar, *or* water

Cook these ingredients until soft. Put through a sieve or food mill. Measure. Add:

½ cup sugar for each cup of pulp
¼ teaspoon salt
2 teaspoons cinnamon
1 teaspoon cloves
½ teaspoon allspice
1 lemon (grated rind and juice)

Cover and cook over low heat until the sugar dissolves. Uncover and cook quickly, stirring constantly so that the apple butter will not stick and burn. Cook until it is thick and smooth when you test it by spooning a bit onto a cold plate.

Heavy saucepan or Dutch oven with cover, knives and cutting boards, measuring cups and spoons, sieve (large) or food mill, wooden stirring spoon, grater, lemon juice.

NO COOKING

PEANUT BUTTER

1½ tablespoons vegetable oil
1 cup peanuts
½ teaspoon salt

Have the children hull peanuts — allow extra for tasting! Put ingredients into an electric blender, and blend to desired smoothness. Add more oil if necessary. Provide plastic knives and crackers.

Blender, measuring cups & spoons, rubber scraper.

Desserts

Many of the fruits or milk dishes make ideal desserts.

NO COOKING

HONEY MILK BALLS

Easy and good. One class made these after a visit from the "Bee Lady" who brought some hives and equipment. Work in small groups so everyone gets involved.

3 tablespoons honey
¼ cup peanut butter
½ cup non-fat dry milk
¼ cup crushed whole wheat flakes
Small amount of butter

Blend honey with peanut butter. Gradually work in dry milk, mixing well. Grease hands and form mixture into small balls. Roll in crushed wheat flakes. Chill serveral hours or overnight.

Try this variation:

¼ cup wheat germ
¼ cup honey
¼ cup peanut butter
½ cup non-fat dry milk
2 cups cereal flakes

Mix and roll into balls. You can also add nuts, coconut, oatmeal, and seeds.

Bowls, mixing spoons.

NO COOKING

OVEN

PAINT BRUSH COOKIES

Good to hang on a Christmas tree!

Use above sugar cookies recipe. Roll ½" thin — cut out (using cookie cutters) and place on cookie sheet.

Add the following paint before baking: Blend 1 egg yolk and ¼ teaspoon water with food coloring in a cup. (Make as many cups as colors desired.) Use small paint brushes or cotton swabs to paint cookies. (Add water if paint dries.) Bake 400 degrees for 6-8 minutes.

OVEN

GINGERBREAD MAN COOKIES

Making these will bring the story of the gingerbread man to life.

⅔ cup shortening
½ cup brown sugar
2 teaspoons ginger
1 teaspoon cinnamon
¼ teaspoon cloves
1½ teaspoon salt
1 egg
¾ cup molasses
3 cups flour (half white flour, half whole wheat)
1 teaspoon baking soda
½ teaspoon baking powder

Cream together first six ingredients. Add egg and molasses and mix. Sift together dry ingredients and stir into mixture. Chill. Each child will help roll the dough and cut his gingerbread man out. He can make a free-form man with a toothpick — or use a cookie cutter. Features of raisins or cherries can be added. Bake on an ungreased cookie sheet 8 to 10 minutes at 375°.

Bowl, measuring cups and spoons, mixing spoon, rolling pins, cookie cutters or toothpicks, spatulas, wooden boards, cookie sheets for baking.

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HOT PLATE, HEAVY SAUCEPAN

APPLE CANDY

Some changes take longer than others.

2 tablespoons (2 packages) unflavored gelatin
1¼ cups applesauce
2 cups sugar
1 tablespoon vanilla
1 cup chopped walnuts, if desired.

Soak the gelatin in ½ cup cold applesauce, set aside. Boil ¾ cup applesauce with the 2 cups sugar for ten minutes over medium to low heat stirring occasionally. Add gelatin mix and boil fifteen minutes more, stirring occasionally. Add vanilla, stir, and pour into a greased 9 x 9 inch pan. Let stand at room temperature overnight until set. Cut into small squares.

Measuring spoons and cups, 9 x 9 inch pan, chopping board, knives, stirring spoon.

OVEN, HOT PLATE

OATMEAL SPICE CAKE

A healthful cake. Preparing it offers many opportunities for making comparisons, contrasts, and seeing changes.

Place one stick of butter, one cup oatmeal and 1¼ cups boiling water in a bowl. Stir and set aside for 20 minutes.

Combine:
1 cup white sugar
1 cup brown sugar
2 eggs
1½ cups flour
½ teaspoon salt
1 teaspoon soda
1 teaspoon baking powder
½ teaspoon nutmeg
1 teaspoon allspice
2 teaspoon cinammon

Blend oat mixture with other combined ingredients and pour into pan 9½" x 12". Bake 40 minutes at 375 degrees. Frosting is really not necessary, but can be done. Good with milk, applesauce, or apple juice.

NO COOKING

FRUIT AND NUT CAKE

Have a little extra of the good "as is" ingredients for tasting ahead of time. Then put a bit of each of the honey, cinnamon, nutmeg, almonds, and raisins in opaque plastic jars to "guess by the odor."

½ cup honey
½ cup oil
1 egg
1¾ cups whole wheat flour
1 teaspoon baking soda
½ teaspoon salt
1 teaspoon cinnamon
¼ teaspoon nutmeg
1 cup chopped blanched almonds
1 cup chopped raisins
1 cup applesauce

Preheat oven to 350 degrees.

Blend the honey, oil, and egg. Sift dry ingredients into honey mixture and beat until smooth (will be thick). Add almonds, raisins and applesauce. Beat well.

Pour batter into a greased 8 inch tube pan and bake for approximately 40 to 50 minutes, or until a knife inserted in the cake comes out clean. This is a fairly flat cake.

NO COOKING

FRUIT WHIP

2 egg whites
½ cup confectioners' sugar (if needed)
1 cup fruit pulp (crushed berries, peaches, applesauce, prune or apricot pulp)

Beat egg whites until stiff peaks form when beater is raised. Gradually add sugar, beating constantly. Fold in fruit. Chill, or eat immediately.

Egg beater, bowl, measuring cups and spoons.

NO COOKING

BAKED CUSTARD

Serve warm on a cold day. Even children who don't like eggs like this.

3 slightly beaten eggs
¼ cup sugar
¼ teaspoon salt
2 cups milk
½ teaspoon vanilla
nutmeg

Combine eggs, sugar, and salt, beat in milk and vanilla. Pour into six 5oz. custard cups; sprinkle with nutmeg. Bake in pan of hot water, at 325° until mixture doesn't adhere to knife (about 40 minutes). For variety add raisins or fruit pieces.

Bowl, egg beater, measuring cups and spoons, custard cups, baking pan, knife.

OVEN

OATMEAL DROP COOKIES

What does heat do to the spoonful of dough? Taste, observe before and after.

2 cups flour
1¼ cups sugar
1 teaspoon baking powder
½ teaspoon baking soda
1 teaspoon salt
1 teaspoon cinnamon
3 cups rolled oats, regular or quick-cooking
1 cup raisins
1 cup vegetable oil
2 eggs
½ cup skim milk
1 cup walnuts

Mix together dry ingredients. Add rolled oats and raisins and mix thoroughly. Add in order, oil, eggs and milk. Beat until thoroughly blended. Stir in walnuts. Drop by teaspoonfuls on ungreased baking sheet about 1½ inches apart. Bake in 400° F. (hot) oven 10 to 12 minutes.

Measuring cups and spoons, bowl, mixing spoons, teaspoons, cookie sheets.

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OVEN

ICE CREAM CONE CUP CAKES

Excellent mathematics problem-solving opportunities here, and more opportunities than usual for each child to measure out the ⅓ or ⅛ cup that will be needed to fill the waffle cups ½ full.

Using any cake recipe or mix, pour ¼ cup batter into flat-bottomed waffle ice cream cones, filling ½ full. Set on baking sheet or in muffin tins to bake 15-18 minutes. Cool. The children may frost their own and decorate, although if a fruit and nut cake is used frosting is not necessary. Makes about 2 to 2½ dozen.

Bowl, cake mix, large spoon, waffle ice cream cones, baking sheet, measuring cup, frosting.

OVEN

SUGAR COOKIES

Rolling is a real skill. Get some parents in to help. Pumpkin, star, heart, bunny, or Santa cookie cutters will tie these to a holiday; circle, star, triangle, and diamond cookie cutters to math concepts.

3½ cups flour
1 teaspoon baking powder
½ teaspoon salt
1 cup shortening
1½ cups sugar
2 eggs, well beaten
1½ teaspoons vanilla

Sift flour; measure; add baking powder and salt; sift again. Cream shortening; add sugar gradually and continue to beat until light. Add well-beaten eggs and blend thoroughly; add vanilla.

Combine the dry ingredients and the creamed mixture; mix all thoroughly and chill. Roll as thin as possible on a lightly floured board and cut with cookie cutter. Or form small balls of dough and place on a greased cookie sheet; flatten with bottom of glass tumbler, first greased and then dipped in sugar. Sprinkle with granulated or colored sugar. Bake 400 degrees 6-8 minutes. (Makes about 6 dozen.)

Measuring cup, measuring spoons, sifter, large bowl, rolling pin, cookie sheet.

NO COOKING

EASY PUMPKIN PUDDING

For those seeking an easy recipe using pumpkin. A good illustration of the change from "thin" to "thick."

1 package instant vanilla pudding
1 cup whole milk
1 cup canned pumpkin pie filling

Mix milk and pudding according to package directions. Fold in pumpkin pie filling. Let stand 5 minutes, and it is ready to eat. This is especially good for young children because it is so easy to make and mild in flavor. Be sure to get the pie filling instead of plain canned pumplin.

Egg beater, bowl, can opener, measuring cup.

NO COOKING

HOMEMADE VANILLA ICE CREAM

Every child should grow up with the unforgettable experience of making and eating homemade ice cream. Ask some parents to come and help. A good demonstration of the differences between the present and the "olden days."

Use a crank freezer. For a 3 quart freezer, mix:
1 can sweetened condensed milk
2 tablespoons vanilla
1 pint heavy cream
2 cups sugar
4 eggs
milk — fill to 4 inches from top

You need plenty of ice and rock salt — layer in freezer (follow directions that come with freezer). Give each child a turn at the cranking. If you freeze water ahead of time in 5 half-gallon cardboard milk containers, then hammer them to crush the ice, it is an inexpensive handy source of ice. You'll need newspapers under the freezer as it gets leaky — you'll find it easier if you can crank outside. Let children play on the playground during the freezing process, as well as cranking and sitting on the freezer.

Ice, rock salt, newspapers, ice cream crank freezer, hammer, measuring cups and spoons.

Snacks

Try these ideas at snacktime as a change from or to accompany juice or milk.

Small sandwiches with pineapple cream cheese or various other spreads. Use fruit or nut breads with mild cheese fillings.

"Pooh butter" (a mixture of honey and butter) to spread thinly on dark bread, fruit bread, or graham crackers.

Grown-up dips are fun. Use toast, corn chips, wheat crackers, or vegetables to scoop up a dip made from chopped egg, thinned cottage cheese, cheese dip, or peanut butter.

Crackers of different shapes can help children learn the names of shapes. Whole grain crackers are best. Spread with cream cheese, peanut butter, etc.

Plain yogurt with fresh or cooked fruit. (Make your own if someone has a yogurt maker).

Comb honey on dark bread or crackers, or sorghum on corn bread or biscuits.

Fresh pineapple, peeled, cored, and sliced at the table.

Oranges rolled until soft. Insert a stiff straw, then suck. Open and eat meat later.

Maple syrup dripped on fresh snow.

Snow cones out of fruit concentrate poured on crushed ice.

Melba toast made from thin sliced homemade bread baked in a low oven for 2 hours.

Hard cooked eggs.

Vegetable or fruit slices.

Natural cheese or cold meat cubes.

Small fruits (strawberries, grapes) or fruit slices to be dipped in a tiny bit of powdered sugar.

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ELECTRIC SKILLET OR HOT PLATE AND COVERED FRYING PAN

FRIED PUMPKIN SEEDS

For the day after jack-o-lanterns are made. Save some to plant outdoors in the spring.

Scoop out the seeds from the pumpkin — rinse pulp from seeds. Dry carefully so the grease won't splatter. Put 1 tablespoon of oil in the electric skillet. When grease is hot pour in seeds. Fry until golden brown. Put seeds on paper towels and salt. Children are amazed that these taste so good. Adults must put seeds in and out of skillet.

Bowl, spoons, paper towels.

HOT PLATE, LARGE SAUCEPAN

THANKSGIVING OR CHRISTMAS PUNCH

Gives children a chance to see where juice comes from. Many don't know.

4 cups (one package) cranberries
6 cups water
1 cup sugar
Wash cranberries

Cook cranberries in water until skins pop. Strain, using food mill, colander, or sieve. Stir sugar into hot juice until it is dissolved, reheating briefly if necessary. Add pineapple juice or orange juice to taste. Serve hot or cold.

Measuring cups, food mill colander or sieve, large sauce pans.

NO COOKING

STUFFED LYCHEES (Hawaiian)
(Lie-chee)

1 3-0z. package cream cheese, softened
½ cup macadamia nuts, finely chopped (or almonds)
1 11-oz. can lychee, drained

Combine cream cheese and macadamia nuts; mix well. Stuff in lychee cavity. Yield: Approximately 20.

HOT PLATE, SAUCEPAN

POPSICLES

These are less sweet, far more nutritious, and far less expensive than the commercial popsicles.

2 packages unflavored gelatin (2 tablespoons)
1 cup cold water
3 cups fruit juice

Soften gelatin in cold water. Add hot fruit juice and stir until the gelatin is dissolved. Freeze in plastic popsicle molds or ice cube trays. If ice cube trays are used, insert a "handle" when they are partly frozen — tongue blades, washed ice cream bar sticks, etc. Related or complementary flavors of juice work best. Try orange-pineapple, lemon-orange, grape-grapefruit, grape-apple. Experiment a bit!

Measuring cups, bowl, ice cube trays, popsicle molds, pan for heating water.

NO COOKING

APPLE RINGS

Core a whole raw apple and fill the cavity with crunchy peanut butter. Slice in ½" rings and serve.

Cutting board, knives, vegetable peeler or corer.

POPCORN POPPER, PREFERABLY WITH A CLEAR TOP

POPCORN

Popcorn is something we can SEE and HEAR and SMELL and TOUCH and TASTE! In some places, you can buy unshelled popcorn to help children learn where it comes from.

½ cup popcorn yields 1½ quarts when popped. If possible use corn popper with a transparent top so children can watch corn pop. Corn can be popped with or without oil. Paper cups can be used to hold individual servings.

Variations: Spread freshly popped corn in a flat pan; keep hot and crisp in the oven. Grate cheese, add salt. Pour mixture over popcorn. Stir until every kernel is cheese flavored.

NO COOKING

JUICE CREATIONS

Let the children do the squeezing or measuring.

Even though plain milk, pure fruit juices, and water are the most appropriate beverages for children, mixtures of juices will provide needed variety and help use up small portions of juice. Other recipes will make a nice treat. Many of the beverages sold on the juice shelves are "drinks" not juice. Avoid these, to protect both children's health and the food budget. Look at the list of ingredients on the label. If water or sugar are listed *first*, the product is probably a "drink" or "ade," not pure fruit juice.

Try mixing:

1. Equal parts pineapple and orange juice.
2. Equal parts orange juice and apricot juice
3. One part grape juice and two parts pineapple juice
4. Equal parts orange juice and grapefruit juice
5. One part prune juice with two parts orange juice
6. Prune juice, grape juice, tomato juice or apricot juice with a squeeze, or a carefully measure teaspoonful (or less) of lemon juice, in each serving
7. Equal parts tomato juice and buttermilk
8. Equal parts pineapple juice and buttermilk
9. Equal parts pineapple juice and apricot juice
10. Two parts tomato juice, one part carrot juice, dash of lemon juice
11. Equal parts apple and prune juice
12. Equal parts pineapple and grapefruit juice.

NO COOKING

FRUIT SHAKE

⅓ cup instant dry milk solids
1 cup chilled orange juice, pineapple juice, or a mixture
1 teaspoon sugar if desired

Combine ingredients in a plastic shaker or blender with ice cubes or cracked ice. Shake or blend until creamy. Serves two children. Recipe can be doubled or tripled.

Measuring cups and spoons, blender or plastic shaker.

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Serving Snacks

Young children usually require food in between the traditional three meals a day. The younger the child, the more important the snack. Yet all too often little thought is given to variety and interest and good nutrition at snack time. Apple juice or milk every day can get as dull as a regular diet of hamburger and French-fried potatoes. Frequently the standard accompaniment to juice or milk in both home and school is a cookie, which supplements a diet already too sweet.

Broadening the range of things served and varying the way they are served makes better sense nutritionally *and* psychologically. Variety costs little more, especially if nutritional values are counted as part of the day's requirements. The most expensive things and those that contribute little to adequate nutrition are in the empty calorie category, such as artificial fruit drinks, "ades," popsicles, "store-bought" cookies and cakes, sweet ready-to-eat cereals, soda pop, and candy. These should be avoided.

Instead, try a wide range of fruit and vegetable juices, fresh and cooked vegetables and fruits, cheeses, whole-grain crackers, cereals and breads, dried fruits, nuts, and cold meat. Serving a variety of these foods for snacks contributes to good nutrition and keeps interest high in "what's for snacks?" Anticipation and enjoyment of good food contribute to good nutrition and good eating habits.

Varying the snack is an ideal way to introduce children to many kinds of food. *"Yech, I don't want any!"* is a typical reaction when a new or unfamiliar mixture of food first appears. This reluctance can be overcome by making the unfamiliar familiar. Taste and learn names ahead of time, and the new food is more likely to be accepted.

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By introducing good new foods, snack time can be an enjoyable learning activity, instead of a routine to be disposed of as quickly as possible. Adults and children can relax and enjoy a break without feeling valuable school or work time is being lost. And everyone working with young children needs a chance to relax, whether at home or in school. We must rid ourselves of the idea that we can only relax *away* from the children. An adult and several children can sit at a table and enjoy snacks together, conversing and being refreshed by healthful food.

Snacks can be planned to correlate with other learnings that are going on. It is not at all necessary to have such correlation every day, but do plan for it sometimes. Examples of such learnings are given elsewhere in this publication. Don't forget social learnings!

Frequently a teacher can plan for children to make real choices of food at snack time more easily than any other time. Usually very few choices are available at regular meals, but children need to learn that choices are possible, and that they can make them. This, by the way, is an excellent way to use up leftover juice, or small amounts of fruit.

"Would you like a slice of orange or a slice of apple?" "Would you like tomato juice or orange juice?" "Do you prefer carrots or celery?" "Would you care for cheese or peanut butter on your bread?"

Small Group or Large Group?

Early childhood leaders have varying opinions about the way snacks should be served. All together at one table? A few children at a time? Separate table, but everyone seated at once? All these procedures have certain advantages and disadvantages. Having snacks together at one big table fosters a feeling of "We're all together!" and for certain snacks, such as those involving group preparation, seems to be ideal. But people eat at differing paces, and what does one do about the speedy eater who wants to leave and take half the group along? Conversation in a large group is sometimes difficult, and all other activities in the room must stop.

Having snacks at one table or in one portion of the room — preferably with one adult and five to seven children definitely promotes conversation. The "family size" group is small enough that everyone can have a say. No problem exists with differences in eating pace, as the children rotate. The one who is finished goes to tell another one, *"It's time for snacks."* Children quickly learn that their turns will come, and are not impatient, especially since other interesting activities in the room continue.

The arrangement of having two or three tables going at once, preferably with an adult at each table, especially with younger children, lends itself well to certain types of food preparation. Take, for example, the snack-making project of a tossed salad. A group of six to ten can work together and eat their creation. A full group would probably require too much waiting.

Which procedure should be used? Surely the only logical response is — all of them! Select the procedure according to what is on the menu, the temper of the group, and the hoped-for outcomes. The only absolute is that at least one adult should sit down, eat, and talk with the children while food is being served and eaten.

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School Lunches and Breakfasts

Almost all full-day programs and some half-day ones serve lunches at school. Some serve breakfast. Teachers in elementary schools are seldom involved in planning menus, allotting time, or making policies. In most prekindergarten programs, people working directly with the children are more closely involved. In either case, explain your goals for good nutrition to the food-preparation and service people and enlist their aid.

Any large-scale food service unit has certain disadvantages, some of which run counter to the health and social learnings the school attempts to teach elsewhere. For example, children are sometimes allowed twenty minutes to get their food, get seated, eat, and leave. So that this can be accomplished, conversation is discouraged; and the language arts teacher may spend the next period trying to get the children to talk!

Sometimes younger children are given only spoons for eating, or only spoons and forks. How they are to cut meat or spread butter in a socially acceptable fashion is a puzzle. Three-year-olds can do a quite adequate job of using a knife if they are

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shown how a few times.

Unfortunately, some adults still try to make children eat everything on their plates. Such coercion is totally inappropriate, and is usually ineffective. Even first graders quickly learn to hide the unwanted portions in their milk cartons. Also, the "clean plate club" kind of emphasis can cause an emotional reaction to food and eating and even foster the beginnings of obesity in some children. A solution is less food on the plate.

Discipline and order are usually a problem in school lunchrooms, and one cannot help but wonder if at least some of the problems are caused by the situation rather than the children. Problems aside, many things can be done to utilize learning possibilities when children eat lunch at school.

Ideally, children and adults eat together, relaxing, talking, and enjoying food together. Family-style service is ideal. Children and adults sit together at small tables, with food in serving bowls or on plates. Children can serve themselves, and "seconds" are readily available. Teachers serve as examples in social behavior, courtesy, and nutrition. However, in large school cafeterias most teachers regard this role as a nonprofessional duty, and lunchroom monitors are hired or school personnel take turns supervising. Perhaps these people could be briefed on lunchtime learning possibilities.

Where children eat in their own classrooms or with their teachers in the cafeteria, many learning possibilities present themselves. Concepts such as texture, shape, size, and color are vividly exemplified. Informal labeling and description can help children establish, maintain, and extend those concepts. Talk about colors and count objects at the table when appropriate. Use negative affixes in conversation:

"Do you want your roll with *or without butter on it?"* "Un*fold your napkin and put it across your lap."*

Give precise directions involving location:

"Jessie, there is a place for you beside *Alec." "Jessie, there is a place for you* between *Alec and Kathy." "Jessie, here is a place at the end of the table."*

Incorporate verbs to increase vocabulary:

"Pour out the milk you did not drink." "Spread *the butter."*

Practice in using basic cognitive processes such as categorizing and making associations is easily given. Categorize vegetables, fruit, meat, or beverages: *"What fruit do you want, peaches or applesauce?" "Today we have three vegetables: potatoes, carrots, and celery."*

Then, when the children have had a chance to learn the category and the labels for the various foods, change the question: *"What vegetables are we having today?" "What are the names of some other vegetables?"*

Table conversation consisting primarily of "more," "more dat," or "pass that" should be gradually upgraded so the child can say, *"I want more mashed potatoes, please."* Food and eating utensils should be named during table conversation. *"Use your knife to spread the butter on the bread." "Try eating your applesauce with a spoon instead of your fork."*

But a nonstop talker will soon have a group of nonlisteners! Have in mind what might be table conversation, but keep it casual and enjoyable.

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Learnings from Cooking and Eating

For youngsters to get the full benefit of food experiences, adults in charge must know what knowledge, understanding, and skills those children are ready for. They must also know what learnings children might gain from cooking and eating, and how to promote those learnings. Focus on one or two rather specific objectives for each experience, ignoring or treating casually the others unless some reason comes forward to do otherwise.

A common error made by those just beginning to use food as a way of learning is to try to pull out of each food experience *every* possible learning — size, shape, taste, texture, sound, odor, whether the food is a tuber or a stem, changes in form taking place in the cooking, etc. Such proliferation of content must be totally confusing unless the children already know all those things. And if that is the case, why bother?

Sensory enjoyment

Talk with the children during the experience, helping them focus on the desired outcomes — the learnings for which the experience was selected. Above all, keep the excitement and joy and spirit of doing a project together that cooking and eating with children can bring.

Enjoyment at the sensory level can sometimes be an objective in itself. Pass the pineapple around and let children experience the roughness and stickiness of the pineapple skin, the deep green of the top. Cut it and enjoy the sound of the knife

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cutting through top, skin, core, and meat, and the smell, taste, and texture of the ripe pineapple chunks. Verbalization can focus on something as simple as *"This is a pineapple."* It can focus on one portion of the experience, such as *"This is an uncooked or 'fresh' pineapple; yesterday we had canned pineapple."* It can move into more complex learnings for older children, with the sensory experiences becoming a pleasurable way to get to another objective.

Give some thought to the conversation that is likely to take place. Sometimes we expect children to answer almost impossible questions. For example, relatively few descriptive words apply to taste and smell. What does a carrot (onion, bread, bacon, apple, and so on) smell like? Taste like? Young children can say little except "Good" or "A carrot." Ask and attempt to answer some of the proposed questions ahead of time to make them clearer and better.

Much rather complex factual knowledge is involved in working with food, and scientific knowledge is rather haphazardly mixed with everyday, commonly used knowledge. If questions arise in your mind — "What are legumes?" "What is the relationship between peanuts, coconuts, Brazil nuts, walnuts? The children are confused and so am I." — try to find out the answer. Sometimes the question is best avoided unless it comes up.

NUTRITION

In every cooking and eating experience children are learning about nutrition. Children learn through food experiences, by cooking and tasting and eating foods far more than by what adults say about them. If carbonated drinks and candy are sold in school canteens or vending machines, they become part of the nutrition "curriculum." Children learn through watching what adults in their world eat and enjoy. They learn from advertising on television and radio, in magazine, newspapers, and supermarkets. Seldom is the nutrition education acquired this way accurate or adequate. It can be supplemented by teaching nutritional principles, and giving the reasons for following these principles.

Facts taught about food selection and a balanced diet should be quite simple. Many young children are still in the process of sorting out common food groups — milk and dairy products; fruits and vegetables; meat, fish, and poultry; breads and cereals. Don't make the mistake of telling them more than they want to know or can comprehend. At about the third grade, children can begin to identify the four basic food groups. The tendency is to try to teach "facts" too soon, rather than concentrating on habits and attitudes.

Children can learn that vitamins, minerals, protein, calcium and other nutrients are important to health, but probably not what various vitamins and minerals supply, or what a calorie or carbohydrate is. Establishing eating patterns and habits that put nutritional principles into practice is far more important. Help children to see those principles reflected in what they are experiencing:

"You've tried the brussels sprouts. If you really don't like them, take another helping of green salad. They are both green vegetables." *"We're not having meat today. These cheese sandwiches and deviled eggs are our protein for lunch."* *"I'll peel your apple if you want me to, but you can eat the skin, too. The skin of an*

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apple is really good — and good for you. It's good and crunchy. We call it Mother Nature's toothbrush." "Scrub the potato skins until they are clean; then we can eat the skins, too. They have vitamins and minerals, too." "Let's set the timer so the carrots won't cook too long. They taste better that way, and they're better for you because the vitamins won't be boiled away."

Older children can learn the common food groupings — milk and dairy products; fruits and vegetables; meat, fish, cheese, and poultry; bread and cereals — and how to plan a balanced diet for themselves. Schools or early childhood centers that are serious about nutrition education for the children they serve will take care to involve parents in the teaching-learning process.

MOTOR AND PERCEPTUAL SKILLS

Preparing, cooking, and eating food require muscle coordination and control. Breaking an egg, holding a carrot with one hand and peeling or scrubbing it with another, stirring without spilling, holding meat with a fork and cutting it with a knife, and spreading butter on a slice of bread are only a few of the motor and preceptual skills involved. No one of these is important in itself. A good many adults, after all, still have difficulty separating the white of an egg from the yolk. Through gradual mastery over a large number of skills coordination increases and confidence develops that "I can do it myself."

One writer (Ferreira, 1969) analyzed and divided these skills into groups, starting with gross motions and leading to fine coordination. These are not suggested as a definite sequence, but rather to give some idea of relative difficulty.

Children can learn large muscle control, including the control required to sit in one place next to another child for a short period of time and become interested in eating and tasting. Other skills are handling various utensils, napkins, and perhaps clearing the table; scrubbing and wiping the table, food, and hands; tearing breaking; snapping; and dipping.

Children can learn beginning manipulation and eye-hand coordination. These can be promoted through such skills as pouring, pouring to a given point in a tumbler or cup, mixing, shaking a jar or shaker, wrapping (with foil, paper, dough), and spreading.

Children can learn finer motions and more complex use of both hands. These include rolling with both hands, kneading, juicing with a hand juicer (place a wet cloth under the juicer), peeling with the fingers, and cracking raw eggs.

Children can learn fine coordination and working against resistance. These skills include cutting with table knives, then relatively sharp knives, grinding, beating with an hand egg beater, peeling with a vegetable peeler, grating, and slicing. Knowledge and the control necessary to use tools safely are also important.

Children in kindergarten and first grade can do most of these things, provided they have been shown how and had a little practice. The sequence can serve as a general guide for introduction of skills to younger children. However, if a favorite recipe has a step involving a skill beyond the capability of the children, such as peeling and coring pineapple, the adult can do that. Don't forget that children will learn much about safety, holding, and manipulating as they watch, even though

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they must ultimately do it themselves to really learn.

Some schools teach this kind of motor control in isolated practice sessions — pouring rice, sand, or water, clearing tables and utensils. Then they never let the children do the real things!

DEVELOPING LANGUAGE

Action almost always promotes language development better than objects or pictures. Preparing, cooking, and eating food *is* action. The possibilities for enhancing language development through these means are endless.

Children can learn the names of the foods they are preparing and eating — potato, tomato, pork chops, ham, green beans, bread, juice, milk.

Children can learn the names of the equipment they are using — blender, saucepan, skillet, mixer, measuring cup, spatula, rubber scraper.

Children can learn the names of the actions they are doing — stir, beat, slice, spread, pour, measure, chop, peel, knead.

Children can learn the names of processes involved in cooking — baking, popping, heating, cooling, boiling, freezing, melting, dissolving, steaming, expand, absorb.

Children can learn the names of descriptive terms — ripe, rotten, liquid, solid, raw, cooked, firm, sticky, soft, smooth, crunchy, hard, soft, sweet, salty, sour.

Children can learn the names of common categories — fruits, vegetables, seeds, flowers, spices, meat, grains, nuts.

Children can learn the names of various forms in which food is commonly processed and served — fresh, canned, pickled, cooked, sauce, juice, syrup, dried, buttered, creamed, meal, chips, flakes, granulated, powdered, flour, patty, loaf, puree.

Children can learn about time designations — right away, tomorrow, until jelled, until thickened, slowly, quickly, minutes, hour, after lunch.

Children can learn to compare and contrast. *"The banana and the yellow apple are the same color, but a different shape. They don't taste the same, either." "Cut the stalks of celery so they are all about the same length."*

Children can learn that language can be used to help them get what they need or want. *"I want some more milk." "Please pass the butter." "Is this done?" "These are ready."*

Children can learn the meaning and use of certain grammatical structures — "Do you want your cracker buttered or unbuttered?" "Are these carrots cooked or uncooked?" "Do you want this celery with or without peanut butter?" "You can have either tomato juice or orange juice. Which do you want?"

Future, present, and past tenses of verbs — *"We . . ." "We're going to . . ." "We're . . ."*

These learnings do not just happen. Planning to "talk about the food and what the children are doing" is usually not enough, especially in a center or classroom. What is the desired learning? What language will best bring out that learning? How shall we go about it? Do the children have the necessary background and previous learnings to do what we are planning?

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The following selected portions of a transcription of a popcorn popping session will illustrate. The episode was planned with a group of four- and five-year-olds who needed special language help. A wide variety of language activities had been carried on throughout the year — learning to observe and describe, learning action words, words of contrast and comparison, of relative time, of relative location, as well as an emphasis on sentences. The popping was carried on with the total group, with a teacher and one helper. Yellow popcorn soaked in oil, available at most stores, was popped in a glass-topped popper.

ACTION	COMMENTS
As the teacher and a small group of the children measured, poured, and started the popcorn, unsolicited directions and predictions of what was going to happen began.	Children's spontaneous comments are encouraged. Silence is not conductive to language development, but neither is noise. If it had been too noisy, the teacher could have reminded them to talk one at a time.
"*Pour* the popcorn." "Put that (the lid) *on top of* the pan."	
"The popcorn *will jump.*" "The popcorn *will get hot.*" "It's going to go ***high*** and ***high.***"	Note the prediction of future action. Good thinking and good language.
Juice is served.	Juice is served at this time to help the children wait and observe the popping. Just waiting and watching are not very exciting for four- and five-year-old children.
Children: "I smell it." "The window is getting all wet. It's dirty."	Throughout, the teacher echoes the children's comments as appropriate, and encourages others to say what they see or smell.
Teacher: "What do you suppose that is on the inside of the glass lid?"	
Children: "It's popcorn." "It's oil." "It's foggy." "It's raining *inside.*"	
Teacher: "That moisture inside is called steam, or condensation."	As the corn and oil begin to heat, other observations begin.

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Children: "The oil is moving." "It *sounds like fire.*" "It makes noise." "The corn is hopping up." "It's popping." "It is *jumping.*" "It hits the top; it's trying to *jump out.*" "It might be trying to break it." "Maybe they're trying to escape." "It tries to get out." "It tries to jump out." "It tries to jump out; it turns white." "Look how *full* it's getting." "It's getting *fuller* and *fuller.*" "First there was a *little bit; now* there's a lot." "It's almost done." "The ones that pop kick up the others."	Popping brings more observations including present tense verification of the earlier predictions. Note the many uses of "it," evidence that more systematic work on the names of things needs to be done in the weeks ahead. The teacher does not intrude on the free flow of language to try to get the children to be more precise at this time.
Teacher: "What would happen if I took the lid off now?"	The teacher asks a question to encourage the children to use what they have been observing in another prediction. Verification of this could come in another experience.
Children: "It would pop *all over* the place."	
The corn is salted and bowls are passed around. "*After* Bruno, I get *some.*"	While the children are eating, the teacher puts a kernel of popped corn and a kernel of the oil-soaked unpopped corn so all can see, and elicits comparisons and contrasts.
Children: "That is *cooked;* that *ain't cooked.*" "That is *good to eat;* that is *not good to eat.*" "That *isn't yellow;* that is *yellow.*" "That is *fat;* that is *skinny.*" "One is *popped;* one *ain't*	The teacher unobtrusively encourages the children to take turns speaking so all can hear, and encourages further observations. The colloquial "ain't" is accepted, and will be gradually worked on in other contexts as the child's vocabulary and confidence increases.

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popped."
"One is *dry;* one is *not dry."*
"This *doesn't have oil;* this *has oil."*
"These are *not wet;* these are *wet."*
"They're *not the same color.* One is yellow; one is white."

Teacher: "Are they the same size?"

Children: "One is *big;* one is *little."*

After nine separate observations (several children repeated), the teacher asks a focused question to draw their attention to size. Note that they know the category word "size."

The action and interest generated by the preparation and eating of the popcorn stimulated the spontaneous expression of many of the words and concepts the children had been learning. The episode revealed not only what the children had learned, but what they hadn't learned. Other children, older children, might have seen different things. Another teacher might have used the popcorn popping to bring out other concepts, other learnings.

Here are some guides that will help with language learning in cooking and eating activities:

- Make sure adults know and have clear in their minds the meaning and use of words likely to be used.
- Do some informal evaluation to see if children know the words. If they do, and have the correct concept, your task is easy.
- If children do not know the words, start using them yourself, in connection with the action or object that will make the meaning clear. *"Mary, you can slice the banana into thick pieces — about this thick."*
- Extend the language learnings to other situations.

These steps will not be covered in a day, or even a week. But when finished, the learning will be real and lasting.

READING AND WRITING

The packages, directions, recipes, and advertisements associated with food offer ample opportunity for building a number of reading and writing skills and attitudes.

Children can learn to "read", interpret, and draw inferences from pictures and symbols. Some children who have not had many home experiences with books and magazines, or interpretative trips to the grocery store may have difficulty with this skill. Others, even at age three and four are quite skilled because of repeated exposure to symbols through the mass media, books, food boxes, and trips to the grocery store with people who give explanations.

Children can learn the importance of reading to find out information. Reading a recipe, reading labels on food to make sure it is the right thing, reading to follow

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directions are all essential. Perhaps more important, they can see grown-ups doing the same thing. Even if an adult has a recipe memorized, it should be read to "find out what we are supposed to do." The printed directions on the box of gelatin dessert or instant pudding, the cookbook, card, or experience chart recipe for cranberry relish should be read in front of the children. One of the most powerful incentives to read lies in seeing adults read.

Children can learn to record their own experiences in a way that can be accurately relayed or duplicated. In the classroom, experience charts can be made illustrating and writing the recipe. Before children can learn to write, the teacher can do this. Illustrations from magazines or actual pictures can help. Many teachers make it a practice to send the recipe used home with each child. Older children can print their own, a priceless addition to any family recipe file. As a child sees a parent read a recipe the child has written, the words on the paper take on real meaning for the youngster.

MATHEMATICS

Selecting, purchasing, preparing, cooking, and serving food require mathematical concepts and skills. Many opportunities come up for counting, adding, dividing, subtracting, assessing quantity, measuring, reading and writing number symbols, and so on. These are learned in a concrete and immediately useful way.

It is better to choose a simple recipe so the children can actually measure rather than something complicated they just watch. After all, the adult already knows how! As with language, mathematical learnings through experience with food must be planned, so expected learnings are appropriate for the age and development of the children involved. A three-year-old and a seven-year-old may both enjoy making gelatin salad, but the learnings may be very different.

Children can learn through counting experience — counting and number concepts such as one cup of cold water; two slices of bread for a sandwich; three teaspoons of baking powder; *"We've got two boxes of pudding and each one calls for two cups of milk. How many cups of milk will we need?" "How many raisins do you want? You count them out."* They can learn one-to-one correspondence. — *"If we have six children at the table, how many cups of juice do we need?"* Setting the table, putting one spoon in each bowl, or one straw in each glass or carton all develop this idea.

Children can learn measuring and quantity concepts such as teaspoon, tablespoon, cup, half-cup, one-fourth cup; pint, quart, full, empty; more, less, fewer; too much, not as much as; half, whole twice as much, double. Perhaps, in preparation for the near future, they should begin to learn to "think metric." Older children can learn equivalents.

Working with the actual manipulation of discrete and continuous quantities can help build the understandings necessary to conserve quantity — an important intellectual task usually accomplished in the years from three to eight.

Children can learn numerals on price tags, recipes, and labels as well as written words and abbreviations of measurement terms.

Children can learn commonly used coins and bills and their value. The matching

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of what can be purchased with the amount of money available is no small task at any time. Older children can be involved in these decisions. Younger ones can transmit money for a purchase at the grocery store and receive change.

SCIENCE

Many cooking experiences have elements of good science experiences — even though they may not be labeled "science."

Children can learn processes used in science. Accurate measurement and timing, skillful use of tools, careful observation in using all the senses, wondering, questioning, prediction, estimation, manipulation, classifying, ordering, solving problems, experimentation, verification, making mistakes and correcting them are examples of these processes.

Children can learn many simple science concepts. These include hot, cold, warm, cool, lukewarm; wet, dry, moist; small, large, tiny, long, short; round, not round; square, triangle, circle, semi-circle; and so on.

Children can have beginning experiences with significant concepts in science. Even though complete understanding of many concepts may not be attained until the child is older, he will have the experience background and partial knowledge necessary to that understanding. Some instances are changes in states of matter; cause and effect relationships; the interdependence of living things and their dependence on the earth and sun; the conservation of matter; specific gravity; properties of liquids, solids, and gases; growth; the effect of the environment on substances (mold, rotting, souring, drying); characteristics of combinations of substances (dissolving, mixing, irreversibility of some combinations).

As in classification experiences, care must be taken that full understanding of concepts beyond the children's comprehension is not expected. Complete understanding of specific gravity, for example, requires the merging of several ideas about sinking and floating, light and heavy, displacement and density. This learning is not easily attained. But children who have a good understanding of each of the simpler concepts have a better chance of understanding the more complex one. Many experiences with sink and float occur in preparing and cooking food — a metal fork accidentally dropped in a bowl of liquid sinks, a wooden spoon does not.

Some fruits or vegetables added to a liquid gelatin base sink, some float. These properties can even be used to help make a layered salad. If the cooks *don't* want a layered salad, the mixture must be stirred at a certain time. Children can speculate and make some hypotheses about why these things happen, but probably could not fully comprehend, even if it were explained.

SOCIAL STUDIES

Food traditions are a part of every era and of every culture. Children can learn about the "olden days" and more about their own and other cultures through food experiences. They can learn more about the almost revolutionary changes that have taken place in food production, processing, marketing, and preparation in the last half-century.

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Children can learn more about their own and other cultures through food. Cooking the foods of many lands and peoples can give children a closer relationship and deeper appreciation of those lands and peoples. Foods characteristics of various ethnic groups and different geographic regions within the United States and Canada can add to the understanding of these countries. In most center or classroom groups of children many national backgrounds are represented. Parents (including fathers) can come to school to help children learn about a traditional cultural food specialty and something of its significance.

Children can learn the differences between food production, distritution, and preparation in industrialized nations and nonindustralized, including our own a few years ago. They can begin to understand both the advantages and disadvantages of mass production and distribution. Planting and cultivating a garden, even if in a few flower pots, can help recapture some of the feeling of the olden days, as well as being a modern conservation measure.

Children can have beginning experiences leading to the understanding of important concepts in the social studies, such as interdependence, division of labor as well as the satisfaction of doing a complete job, change, and consumer economics. As with big ideas in science, young children are just at the beginning stages. Full comprehension comes later.

Children can learn about occupations connected with food. Some food experiences should include trips to the grocery store to purchase food. Try to get beyond the farmer and the milkman to food occupations typical of the children's community. Perhaps watch a pizza maker stretch dough, find out about a beekeeper, a fish-rearing unit, a baker, or life behind the scenes at the supermarket. Tie a visit closely to a cooking experience, and greater learning all around will result.

EXECUTIVE ABILITIES

Preparing and cooking food require careful organization, sequencing, planning and following a plan (both for adults and children), including cleaning up. If the mixing bowl is forgotten or the salt box empty, there are problems!

How to plan, anticipate needs, organize and carry out multistep activities is seldom taught directly. Yet it is an important characteristic of competent, well functioning young children and often absent in children who are having difficulties. One does not acquire these skills by learning facts, but by doing.

There are definite differences between what can be expected of a three-year-old and a seven-year-old. Adults must do much of the advance preparation for threes and fours, but should begin to involve them in sequencing and decision making. *"Now what do we need to do?" "What comes next?" "Everyone can't turn the food grinder at once; what shall we do?" "Who's next?"* Older children, with the guidance of a skillful and patient teacher or parent-teacher can do most of the planning, organization, and executing, including deciding how the food can be divided, inviting guests, and cleaning up. A chalkboard is invaluable for recording and revising older children's plans.

Younger children watching an adult mentally or actually tick off items on a check list will begin to learn some planning skills. *"Let's see now, is everything*

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ready? Bowl? Spoon? Can opener?" Given opportunity and guidance, the children will be able to develop executive abilities.

SOCIAL AND EMOTIONAL DEVELOPMENT

Satisfying our body's need for food is one of our first pleasurable experiences. The sharing of food is a universal token of acceptance, hospitality, and love. For young children, food is closely tied with the development of trust, security, and warmth. Dr. Jenny Klein, of the Office of Child Development, recently wrote, "It is becoming increasingly clear that nutrition is an important aspect of early childhood education. It is equally clear that the emotional atmosphere, the warmth, the relaxation, and conversation, are as important as the food served."

Any cooking and eating experience should be accompanied by such positive feelings. If it does not, something is wrong. Examining the many factors that can turn meals at home into a battle of wills, or school lunchrooms into what some have called "zoos" is beyond the scope of this publication. These situations are teaching children as powerfully as the more ideal ones, but neither adults nor children feel very good about what is being learned.

The positive social and emotional learnings that can result when adults and children prepare and eat food together are many.

Children can learn consideration and courtesy for each other. Waiting for one's turn, sharing food, dividing it equitably, eating in a way that makes snack and mealtime pleasant, are all things that have to be learned. They are learned slowly and gradually, both by example and direct teaching.

Children can learn the satisfaction of successfully making something, eating, and sharing it, especially when it can be shared with adults. The importance to child's self-concept of this and the mastering of the concomitant skills would not be underestimated.

Children can learn responsibility appropriate to their age. Preparing, planning, perhaps bringing the food or carrying it home from the store, doing a share of the work, cleaning up and putting away, are opportunities for responsibility that should not be withheld from children. However, neither should they be imposed in a punitive *"you made the mess, now clean it up"* fashion. Adult help and encouragement will help keep attitudes positive.

Children can learn respect for other people. They can learn to respect their likes and dislikes, their need for varying amounts of food, and varying amounts of time in which to eat it. They can learn to respect and like foods from cultures and families other than their own. Equally important, the center and school can show appreciation of the traditional foods of the children's culture to enhance their pride and self-respect.

Children can learn cooperation and just working together. They learn that working together can be fun and can work to everyone's benefit. *"If each one brings one piece of fruit, we can have a delicious fruit salad."* Thinking and planning together — *"What else do we need?" "What comes next?"* Helping each other and comparing are all positive social learnings that cooking experiences can promote.

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00051

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0052

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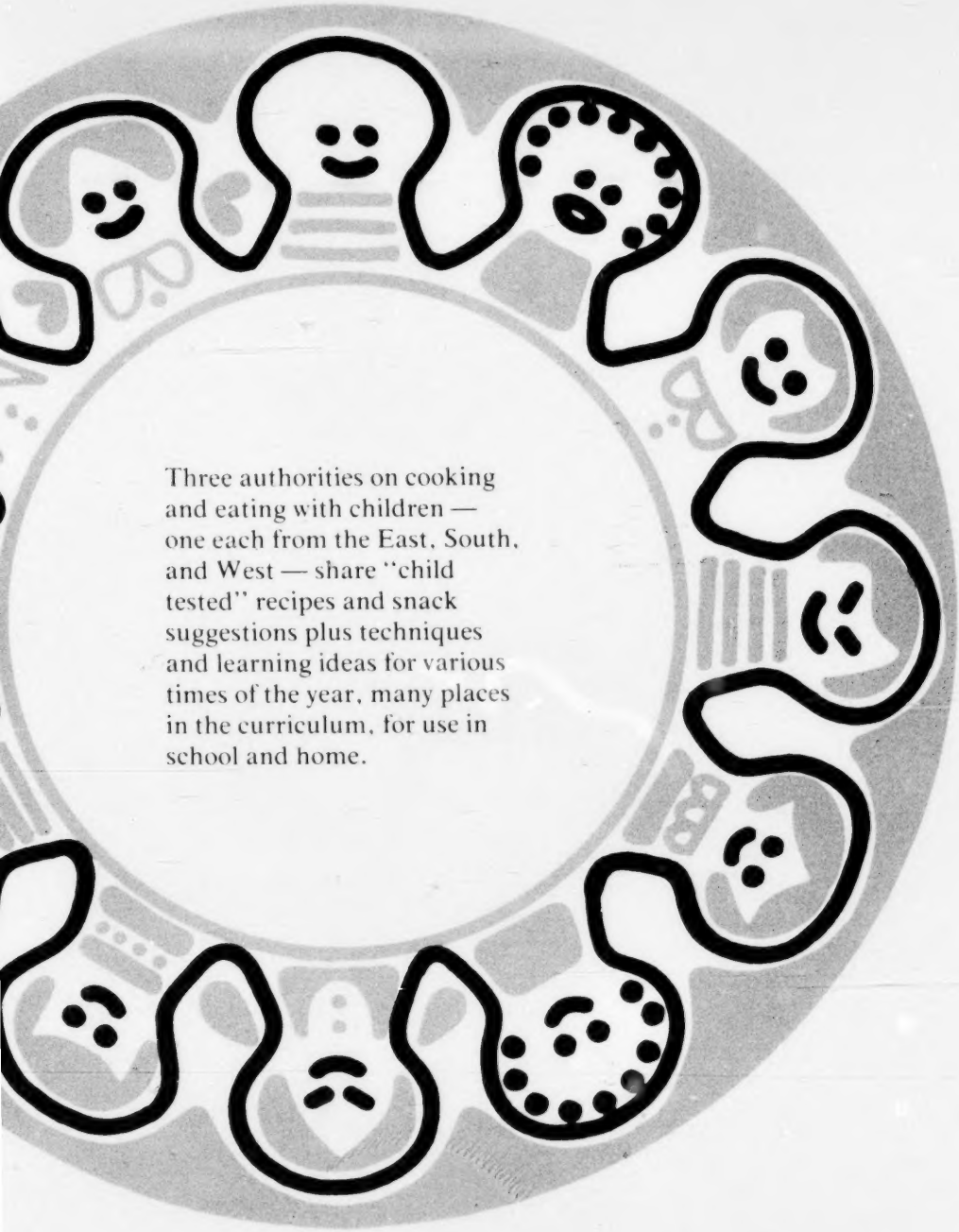

Three authorities on cooking and eating with children — one each from the East, South, and West — share "child tested" recipes and snack suggestions plus techniques and learning ideas for various times of the year, many places in the curriculum, for use in school and home.

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00053